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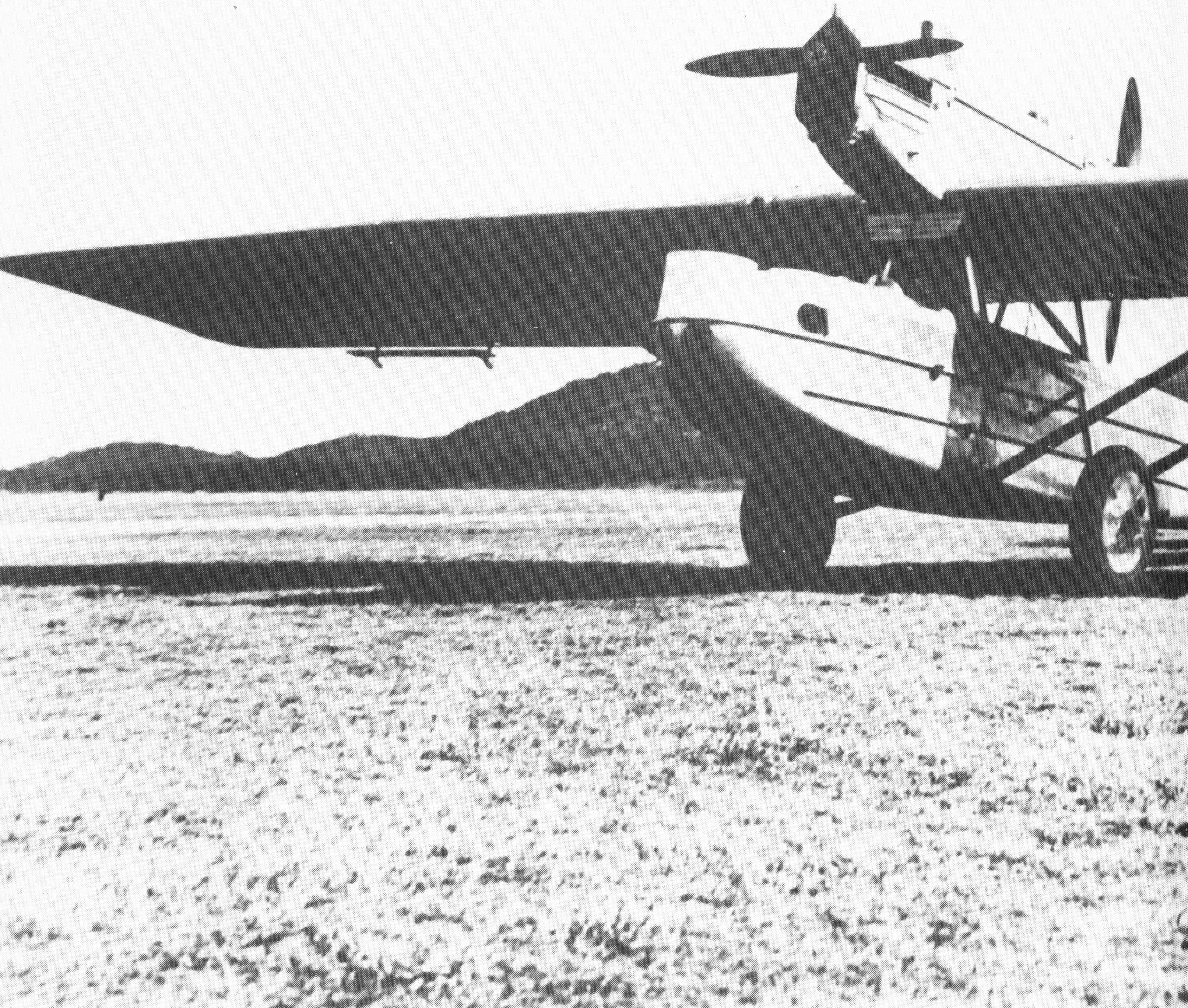
Front cover illustration:
Early Dornier Do 217E-2s. See plate 64.

Back cover illustrations:
Top:
Dornier Do 17Z-2. See plate 39.

Bottom:
Dornier Do 23s in the air. See plate 25.

1. One of the earliest of Dornier's military aircraft was the efficient Do N, which was built in Germany in 1924 and made its first flight on 19 February 1926 in Japan. The reliability of the Dornier *Wal*, *Libelle*, *Falke*, Do C, D and E and finally *Mercure* led to a co-production contract between Dornier and the Kawasaki Dockyard Co. at Kobe involving Do Ns for the Imperial Japanese armed forces.



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ARMS AND
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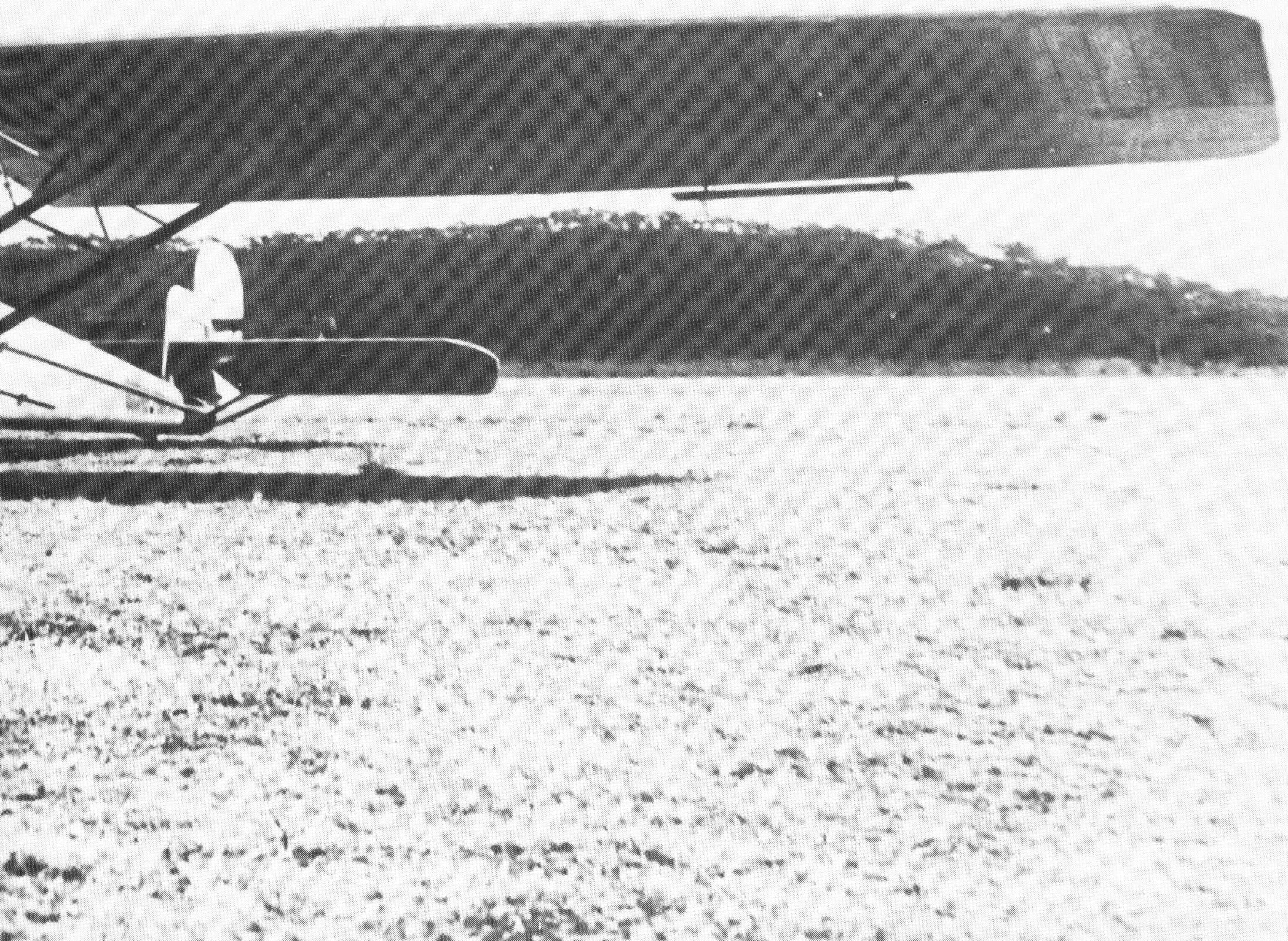

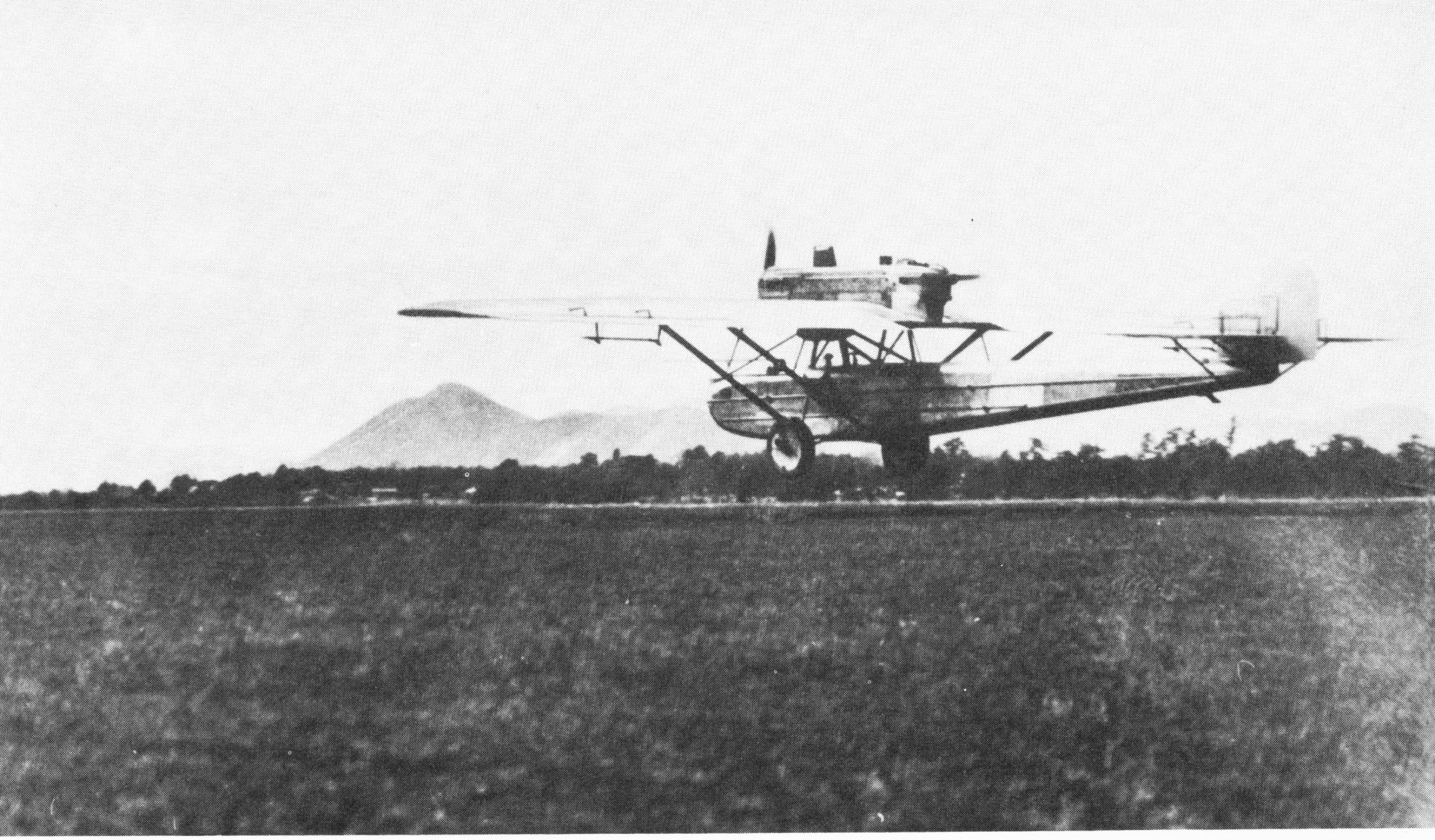

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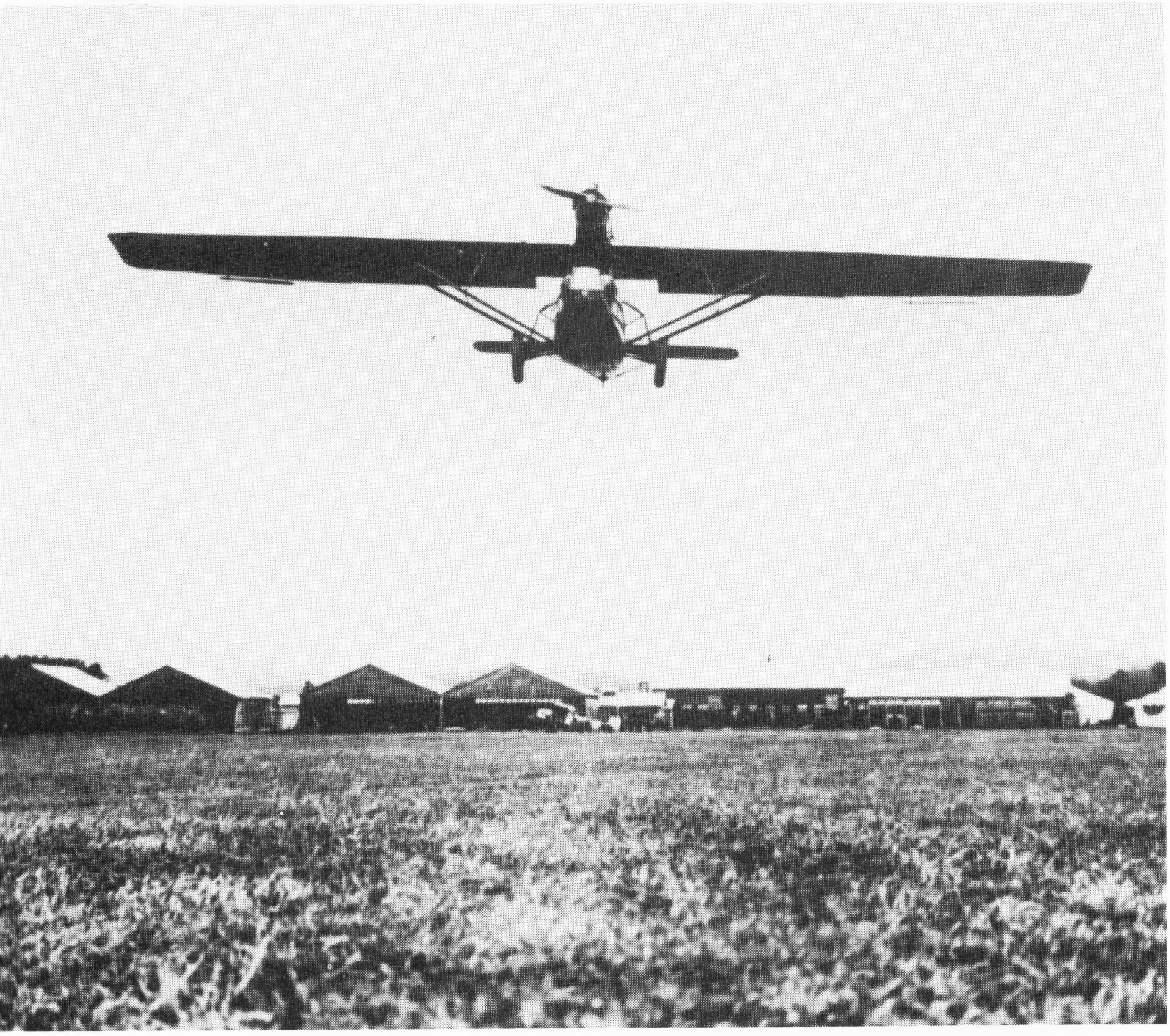

2. The contract provided for the final assembly of the Do N medium bomber to be carried out in Japan; the production of most of the necessary components would be undertaken at the Dornier works at Manzell near Friedrichshafen, the exceptions being the ribs, wing components, undercarriage, propellers and some of the instruments and smaller parts. The Do N, virtually a *Wal* with a large fixed undercarriage, was powered by BMW VI engines; later, some aircraft were fitted with Rolls-Royce Condors or Napier Lions.

3. Under the leadership of Dr Vogt, two engineers, two foreman and a pilot were sent to Japan early in 1925; Dr Claude Dornier himself also visited Kawasaki and was assured that the joint programme was progressing well. The first three-seater 'Heavy Bomber Do N' had a service ceiling of 9,000ft and a cruising speed of about 180kph, and took forty minutes to climb to 9,000ft. Japanese sources indicate that 28 Do Ns – designated Ka 87s in Japan – were built at Kobe.

INTRODUCTION

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The development of the *Luftwaffe* began in secret much earlier than 1933, the date often quoted; by that year, German companies had already built aircraft in Sweden and Switzerland, thanks to the full co-operation offered by the governments of those countries. Dornier, together with Junkers, played an important role in the raising of the new air arm, notably by means of its aero-engines produced on the shores of Lake Constance.

Under the guise of civil transports, many potential bomber aircraft were developed, and many raw crewmen were given valuable experience in long-range, bad-weather and night flying with the *Reichsbahn* (German Railways). During the early 1930s new aircraft such as the Do 11, Do 13 and Do 23 helped to establish the first *Kampfgruppen* of the *Luftwaffe* – which later became the famous *Kampfgeschwader*.

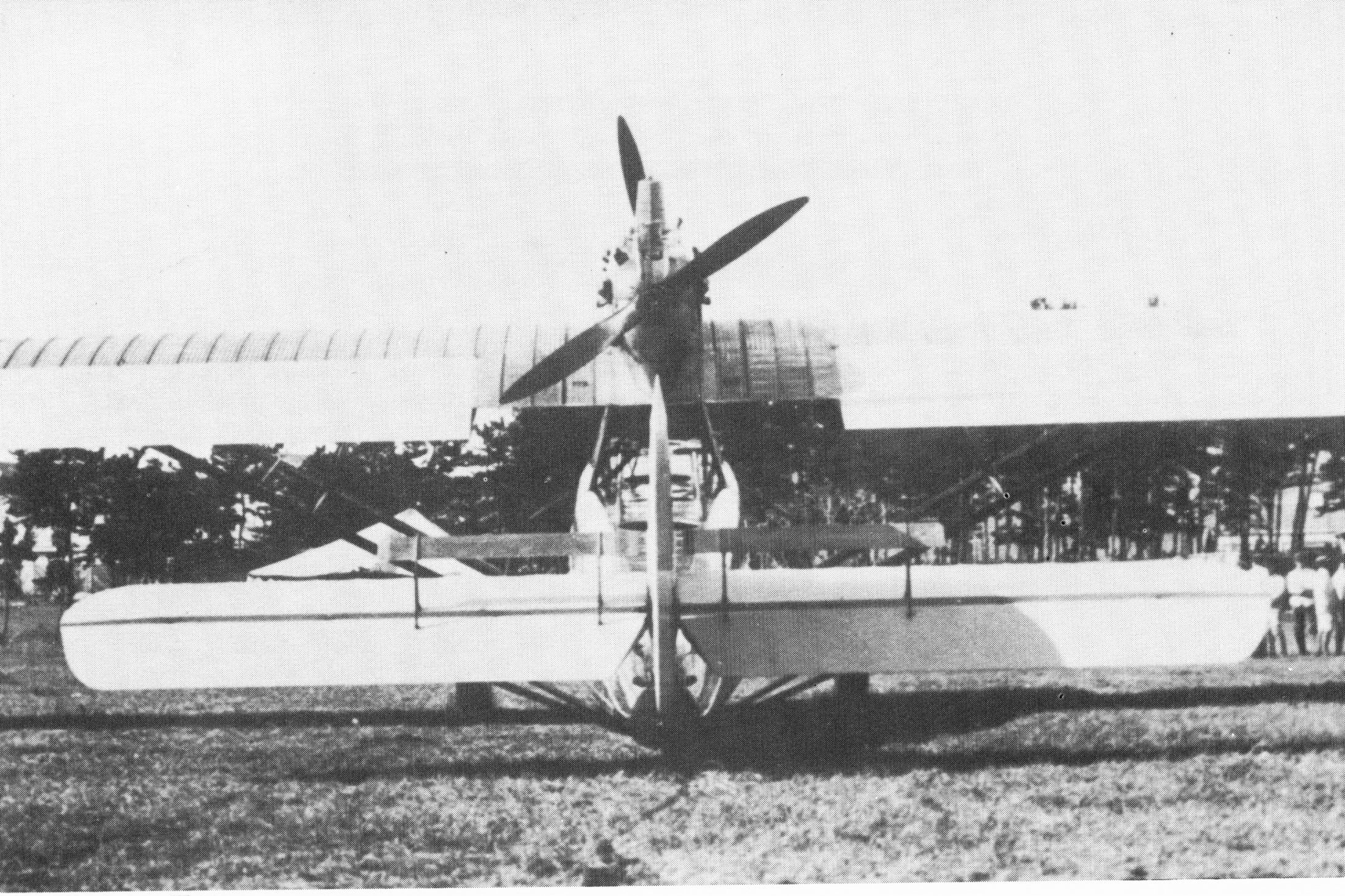
The writings of Generals Giuilio Douhet and William ('Billy') Mitchell, together with the experiences of the Spanish Civil War, pointed the way to the practical uses to which a well-armed bomber might be put. However, the *Luftwaffe*'s High Command did not learn the same lessons as others and remained to be convinced of the attributes of the four-engined strategic bomber; as a result, only one Do 19 was ever built, and this was never flown by a front-line unit. Instead, Germany concentrated her resources on building a number of high-speed medium bombers: as well as the He 111, there was the Do 17 and the modified Do 17Z – otherwise known as the Do 215 – which went into action early in the war.

Together with the Ju 88, a developed Do 17, the Do 217, was built in large quantities, offering improved capabilities and performance. It was the Do 217 which carried the main burden of the offensive air war in Western Europe with *Kampfgeschwader* (KG) 2, 3 and 77; the Do 217E version brought nightly terror to the British people from 1941 to 1944. The Do 217 crews experimented continually with new weapons systems, guided missiles and bombs. The aircraft proved their capabilities over moderate distances but suffered painful losses during anti-shipping raids over the Mediterranean Sea, Atlantic Ocean and English Channel.

Once Germany had lost her air superiority, the front-line bomber units sustained much more serious attrition, and, partly as a result of this, the *'Bomber B'* programme and the *Arbeitsflugzeug* (the Dorner Do 317 and 417) failed.

For their assistance with data and photographs for this volume, I should like to express my thanks to *Direktor* Patt and his helpful team at Dornier GmbH, Munich; Flughafen Frankfurt/Main AG; and Messrs Attonen, Balke, Chapman, Creek, Dabrowski, Dressel, Lutz, Menke, Nowarra, Sanger, Seebra, Seebrandt, Selinger, Sengfelder, Schliepharke, Spork, Stapfer, H and O. Thiele and, finally, Mr Weirich.

Manfred Griehl



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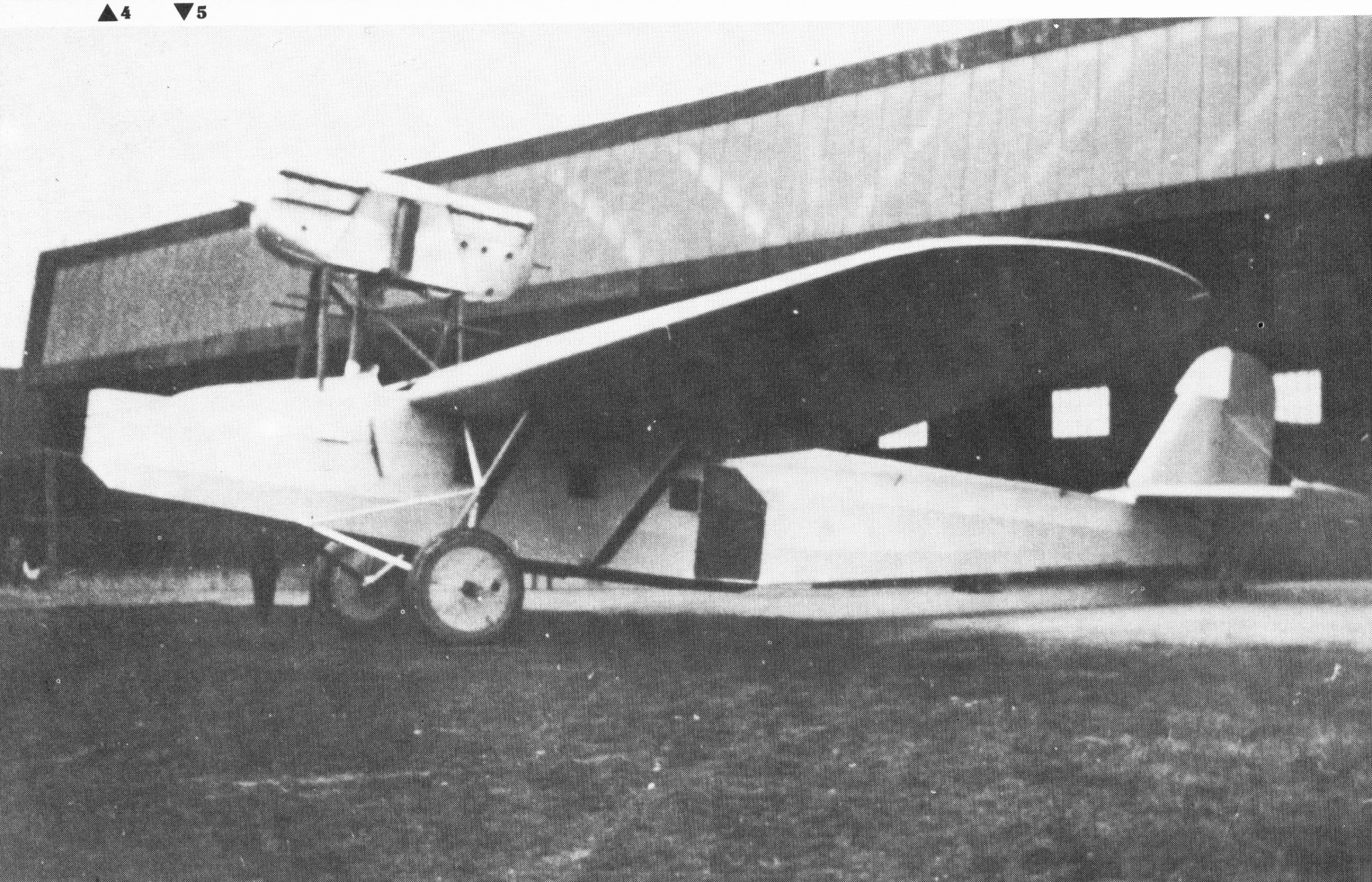
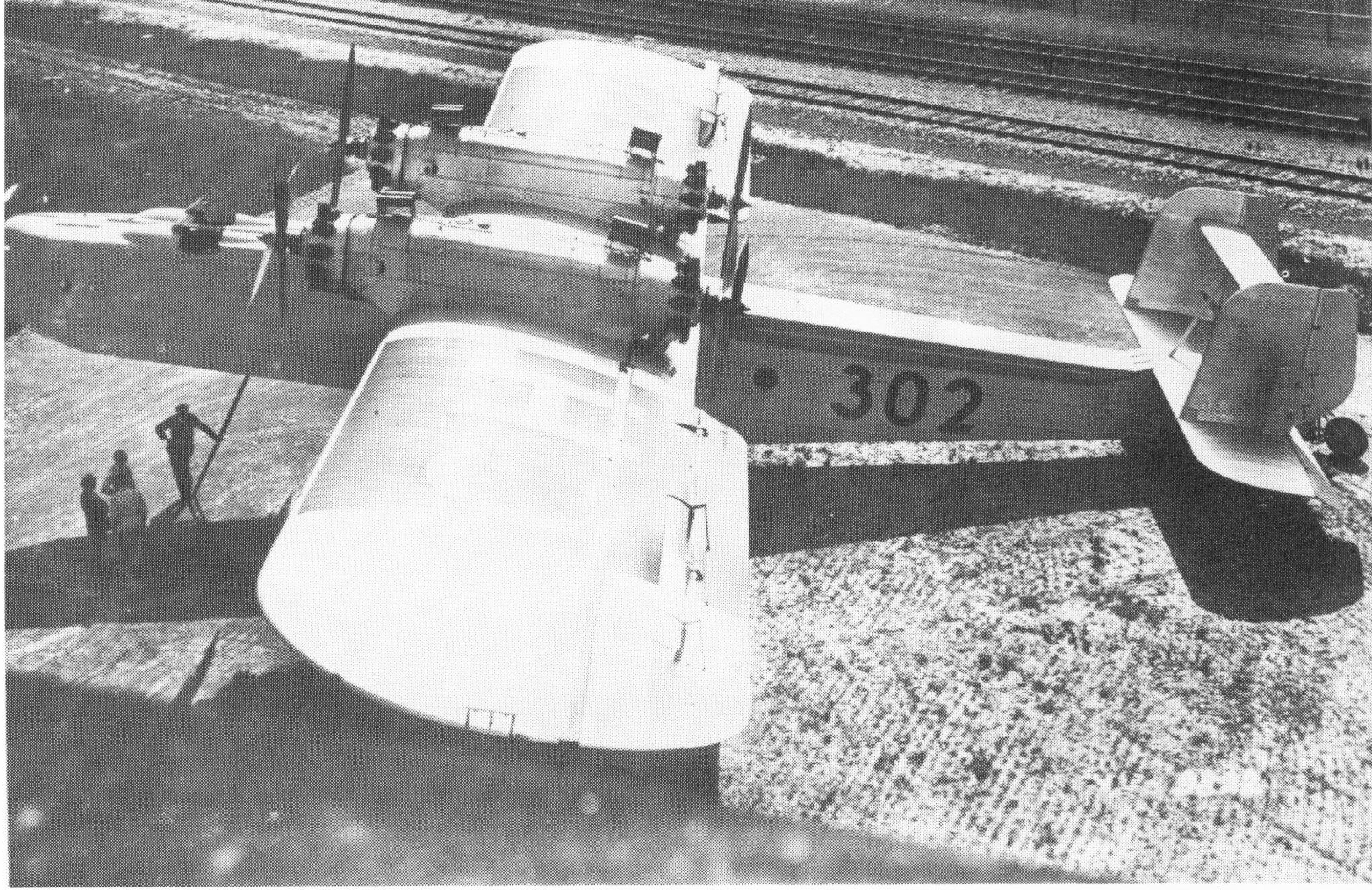


4. A rear view of a Dornier Do N bomber, showing the double-engine nacelle and both rear gun positions (the latter without their weapons), just prior to the aircraft's handover to the Imperial Japanese armed forces.

5. In the early 1930s, a Do Y (Do 15) was modified to carry a double-engine nacelle housing two BMW VIs in order to test these new powerplants. This impressive medium bomber first flew on 17 October 1931. It was scheduled for rebuilidng to civil transport configuration, but after the Do 11, 13 and 23 appeared on the scene this project was abandoned.

6, 7. The Dornier P, a four-engined bomber powered by 510hp Bristol Jupiter radials, was test-flown from 31 March 1930; the first of only two prototypes was completed at Altenrhein in Switzerland and bore the registration CH-302. The first Do P was designed to carry a crew of five or six, with three gun positions.

8. The Dornier Do P was designed as a landplane version of the famous *Superwal*. The second prototype carried the registration D-1982 and was used officially as a transport aircraft. The first prototype was flown to Lipezk in 1932 or 1933 for further development and military trials together with the Junkers K 47, Messerschmitt M 23 and Heinkel He 40.



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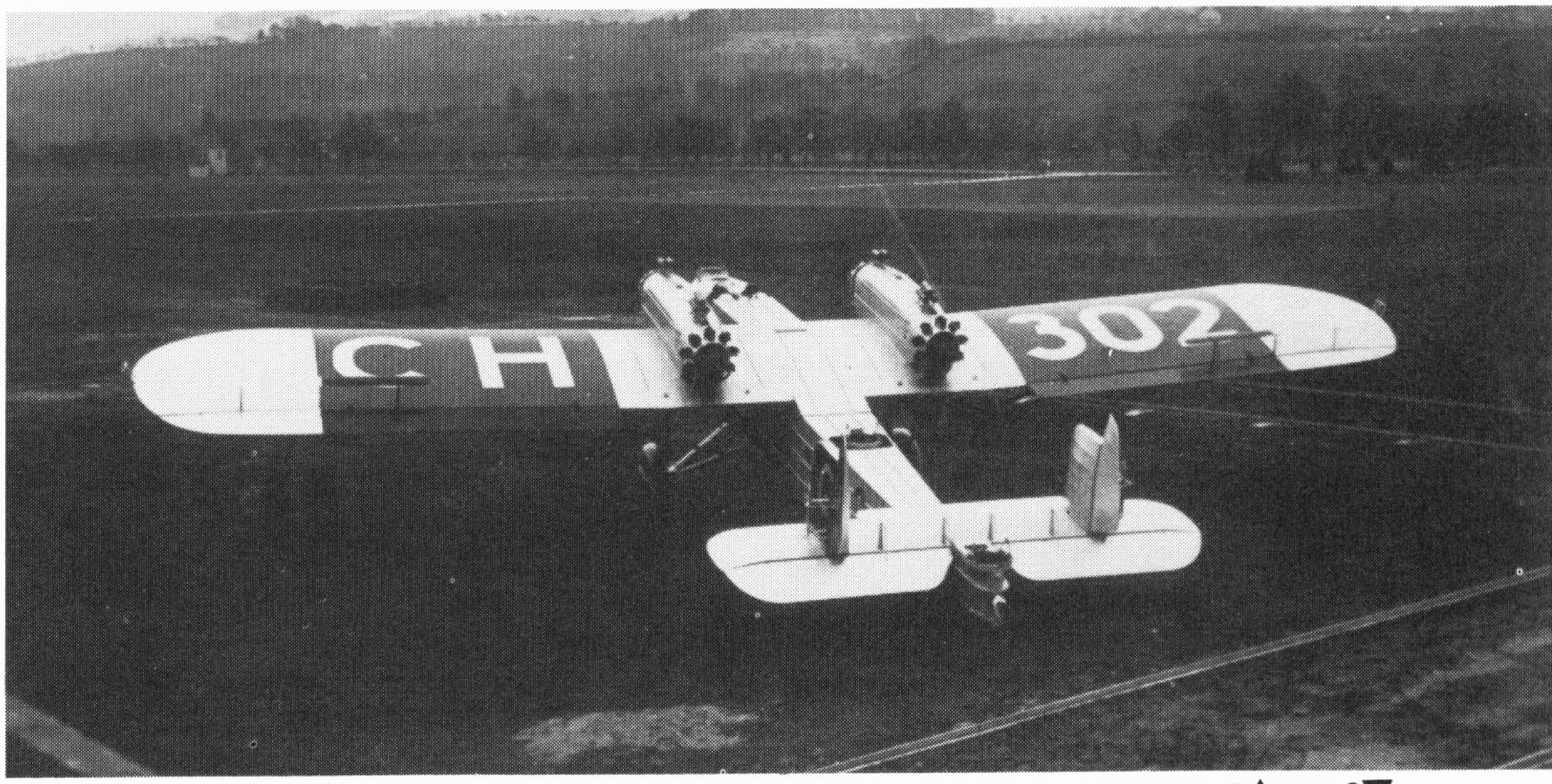

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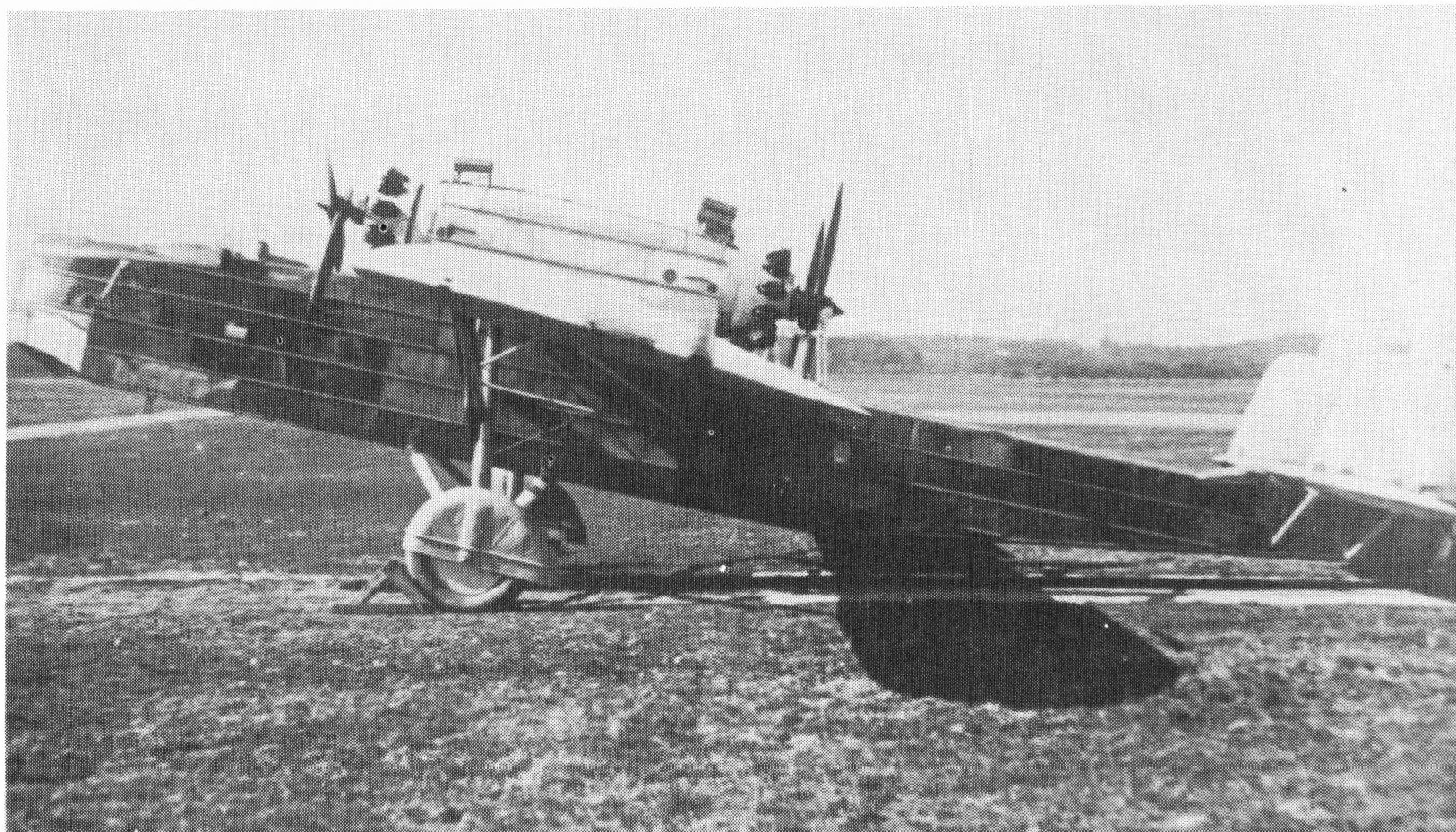

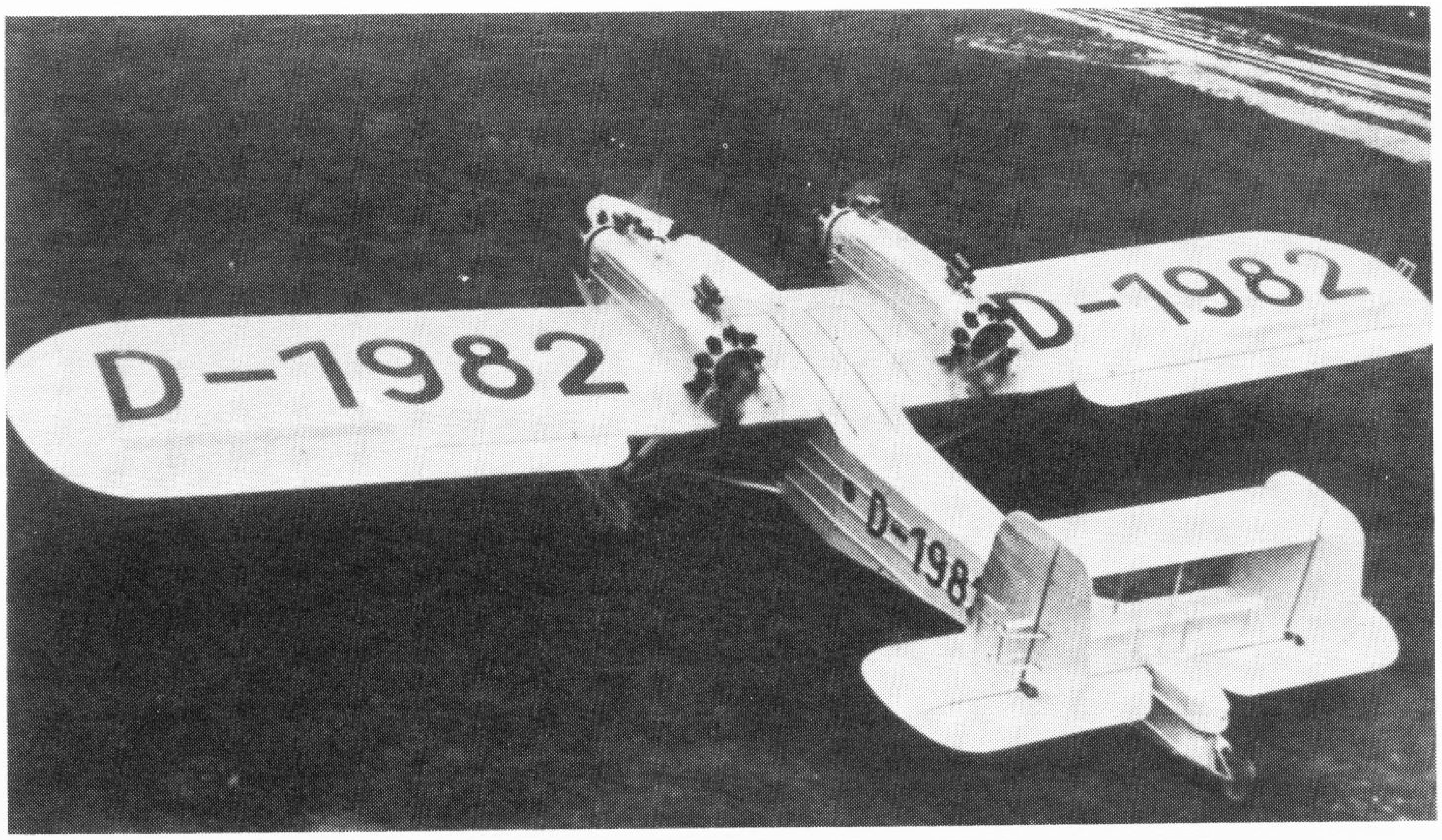

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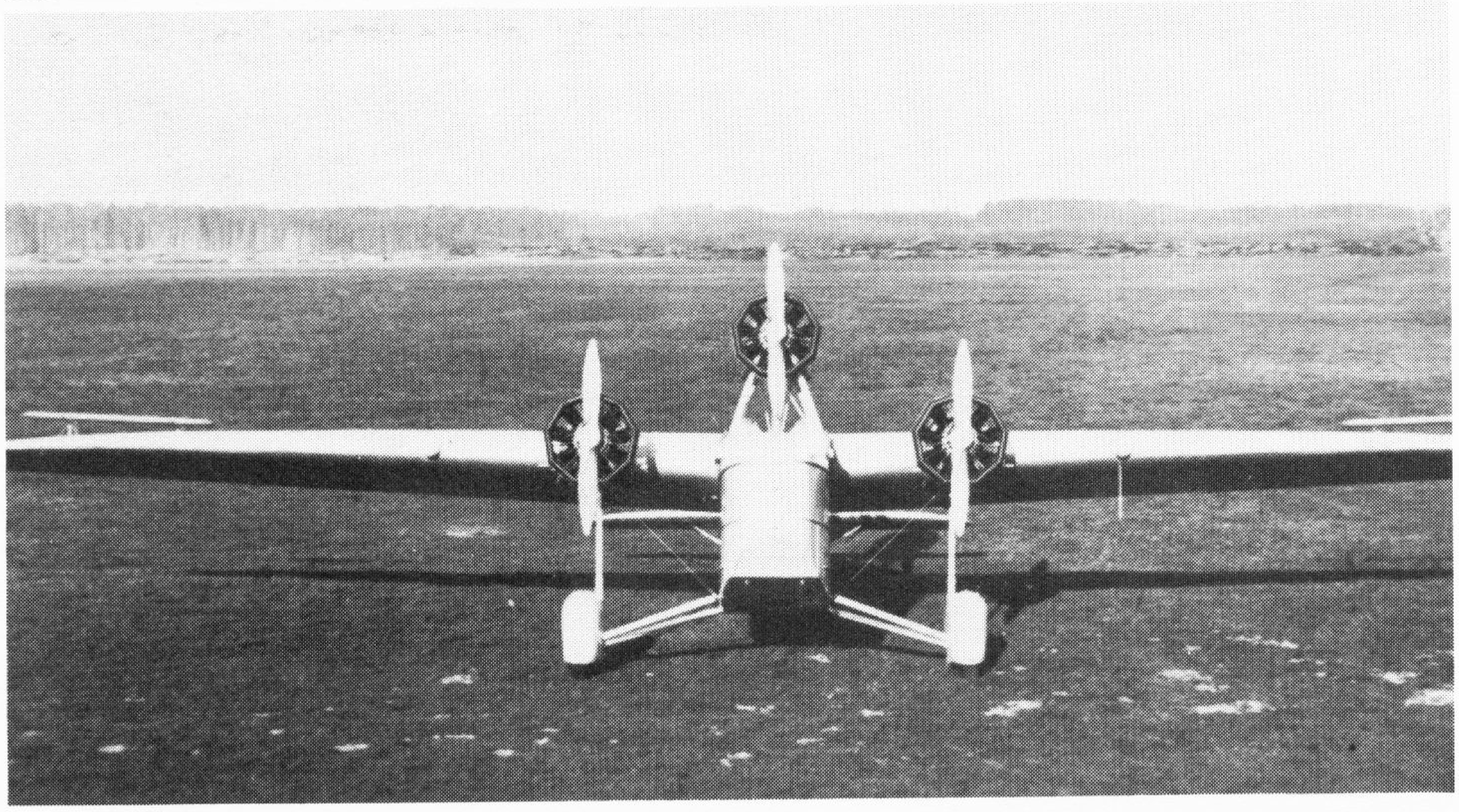

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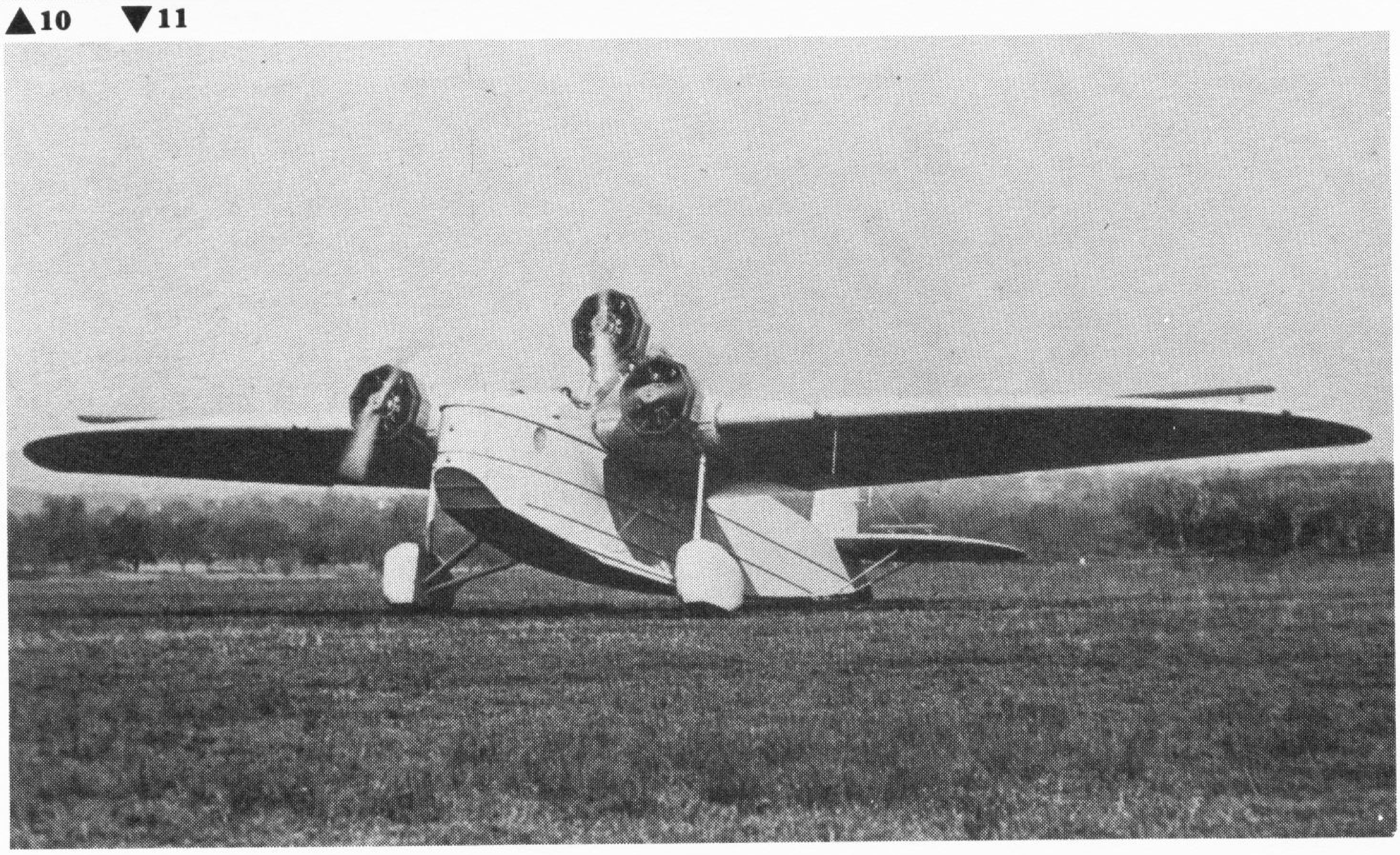
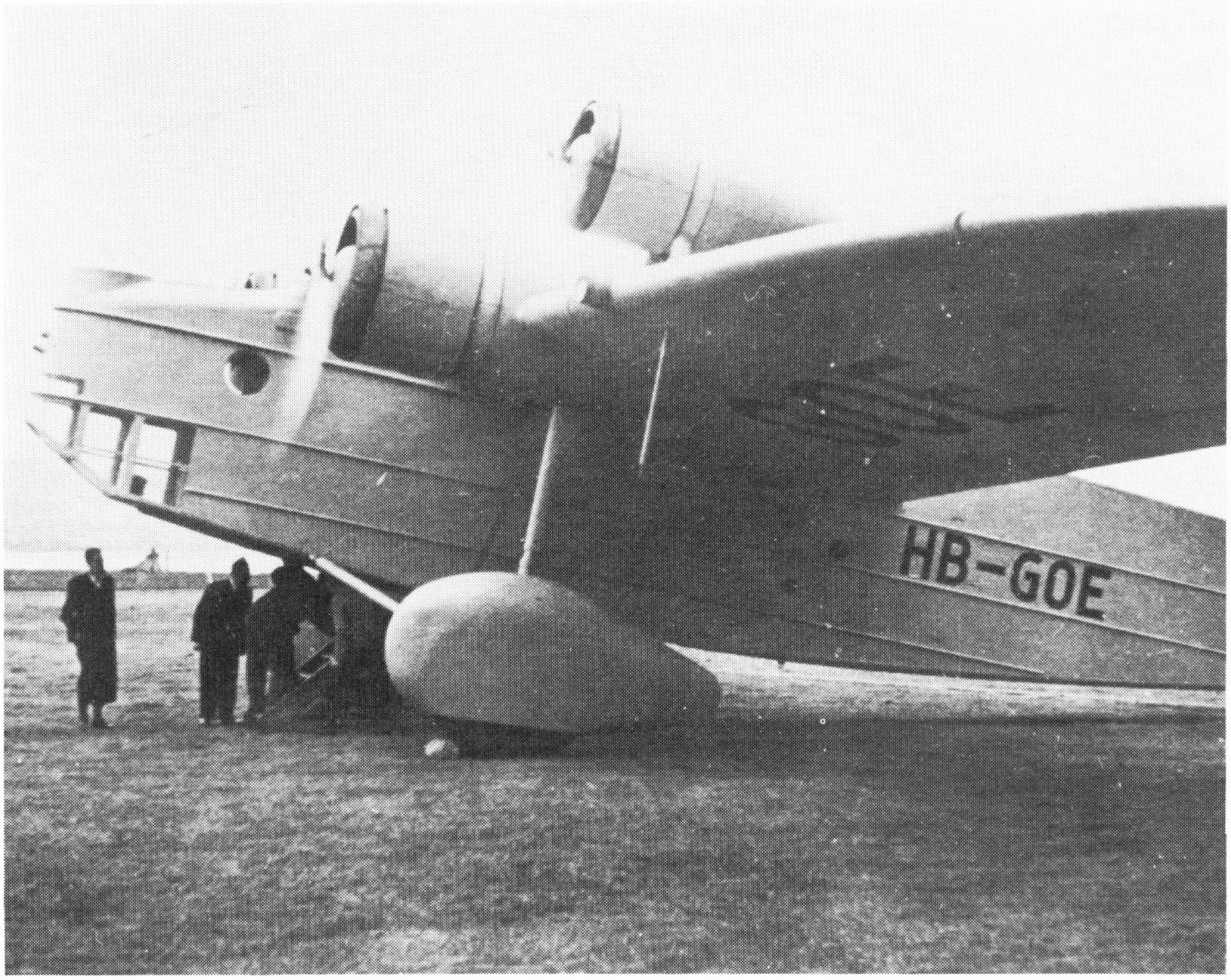


9. While the *Luftwaffe* was being clandestinely established, proposals were made to build a number of Do P transports, for training future bomber crews in an aircraft which had a range of over 1,000km and could operate at an altitude of 10,000ft. The Do P had a maximum speed of 210kph and an empty weight of 8,000kg (increasing to 12,100kg when fully loaded), and it could climb to 6,000ft in about thirteen minutes.

10, 11. The Do Y was the third trimotor aircraft to be built by Dornier. The first had been the gigantic flying boats *RS I* and *II*, of which the former had been destroyed in a storm on 21 December 1915, prior to its maiden flight; the latter, fitted with three 240hp Maybach engines, flew for the first time on 30 June 1916. The Do Y had three 450hp Bristol Jupiters, later changed to 625hp Gnome-Rhône K9s.

12, 13. The first Dornier Do Y took off on 17 October 1931, one of three prototypes all built at Altenrhein and powered by Siemens Jupiter VI engines. The wing spans of the aircraft varied between 26.5 and 28m, maximum range was between 750 and 1,500km, with a service ceiling of about 6,500m, and maximum cruising speed was 300kph; twelve minutes were required to reach an altitude of 12,000ft. Only a small batch of production aircraft was authorized, these having a reduced wing span.



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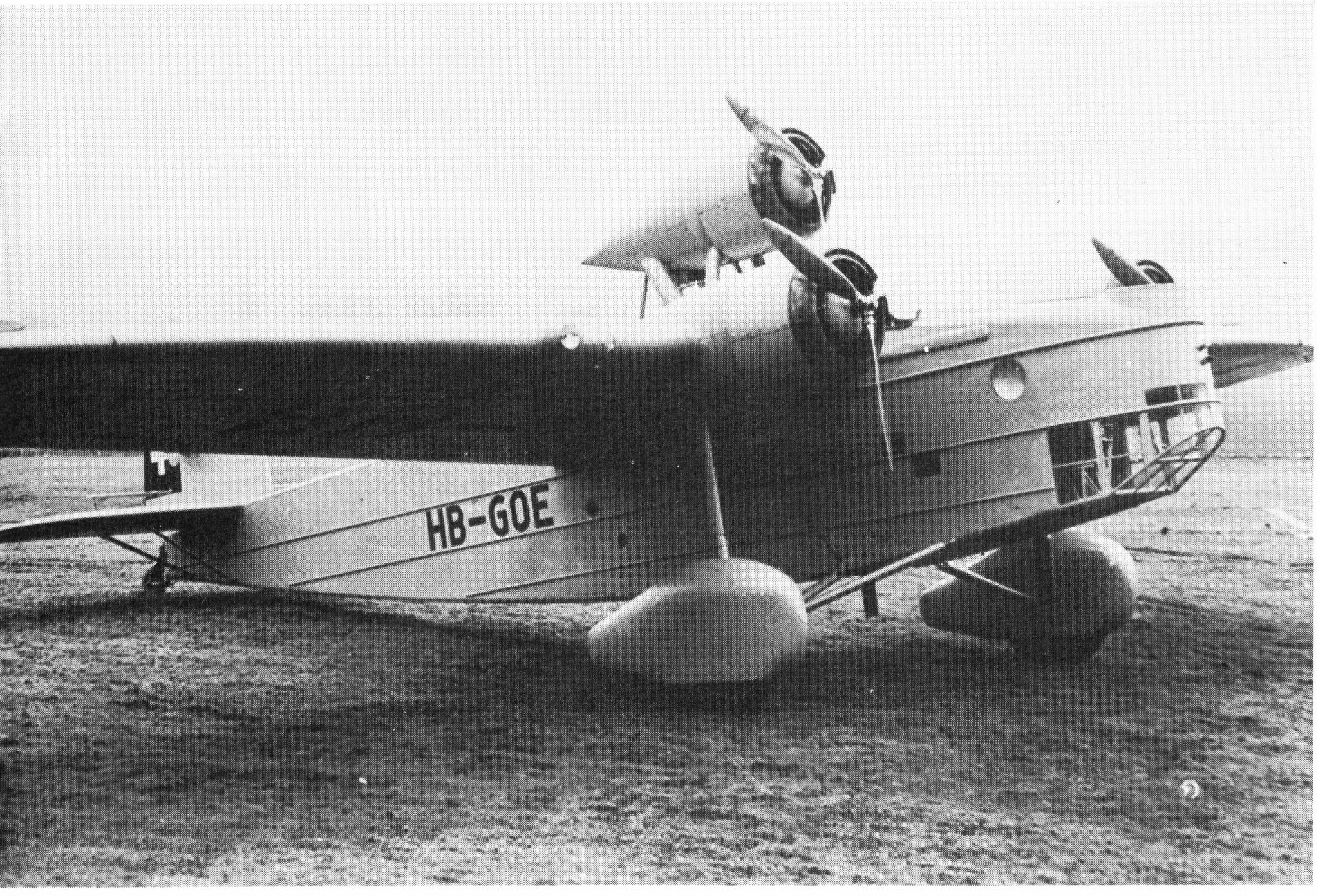

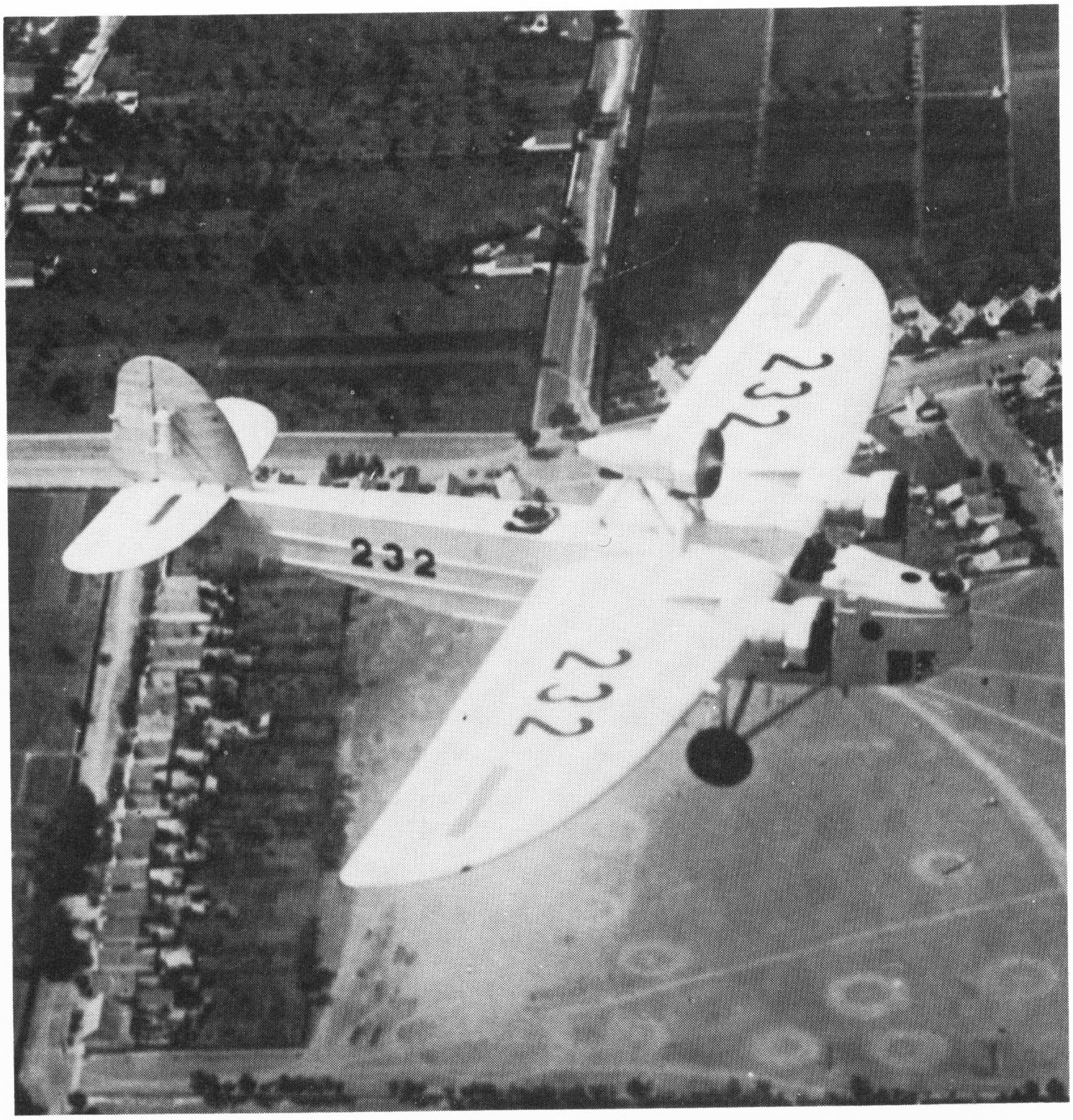

14. One of the Do Ys, photographed during evaluation trials. Some Do Ys were sold to Yugoslavia, where they entered service with the Air Force in 1937, later to be joined by Bristol Blenheims and Do 17Kas. Yugoslavia operated fourteen day bomber and night bomber squadrons, totalling 140 medium bombers, in 1934; two years later the number of aircraft had risen to 172.

15. The Do 11, also known as the Do F, was, officially, a mailplane and transport aircraft and was normally powered by two 650hp Siemens Sh 22 radial engines, although two 530hp Siemens Jupiter VIs were installed for the aircraft's first flight, which took place on 7 May 1932. In contrast to the Do 13 and 23, the Do 11 had a retractable undercarriage. The sole prototype, D-2270, was essentially a metal aircraft, only parts of the airframe utilizing canvas covering.

16. Of the first production series of Dornier Do 11s, the Do 11C, only a very few examples were built by the company, for example D-3017. The aircraft could be recognized by its more powerful Siemens Sh 22B-2 engines and metal propellers,

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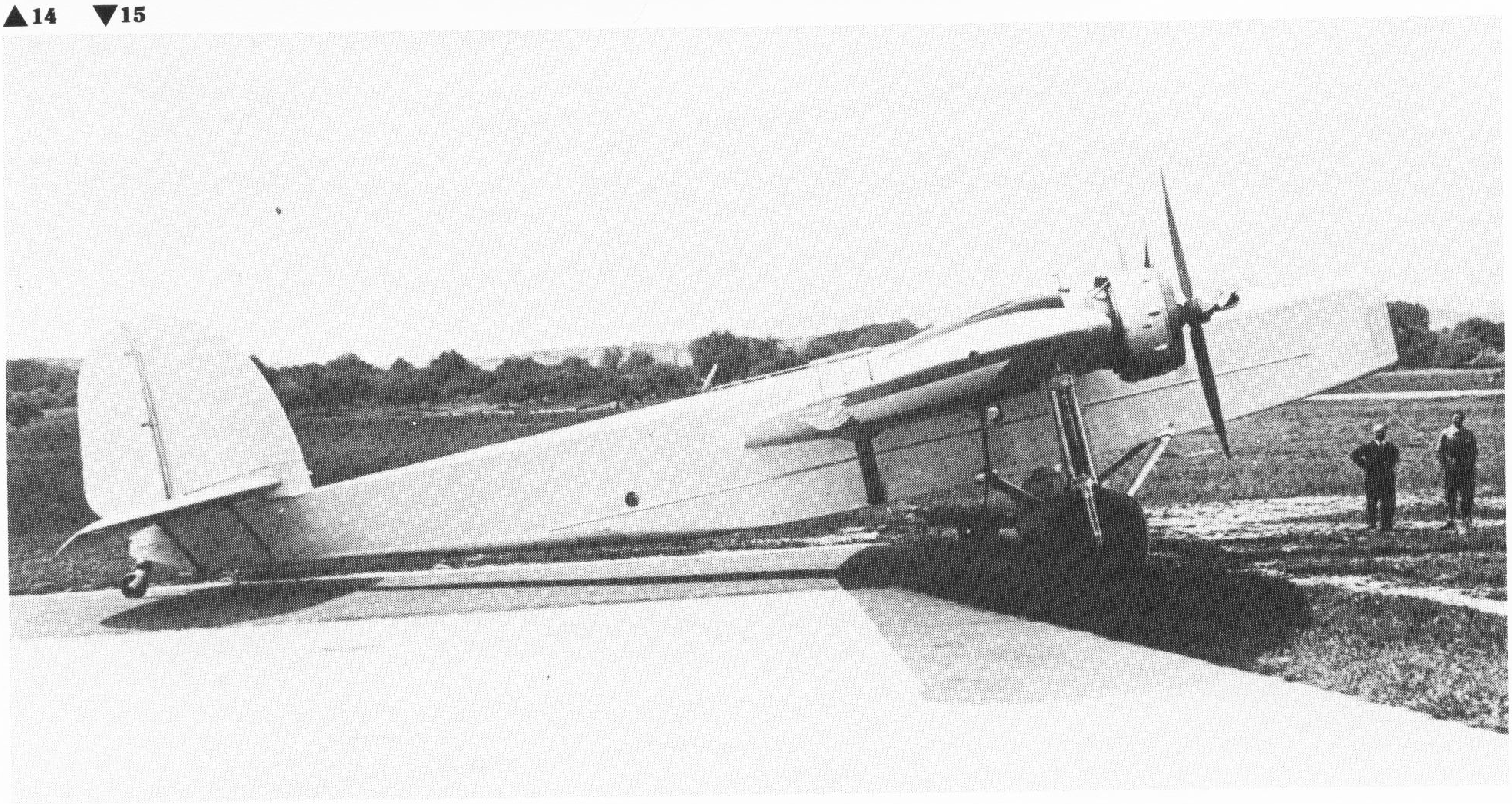
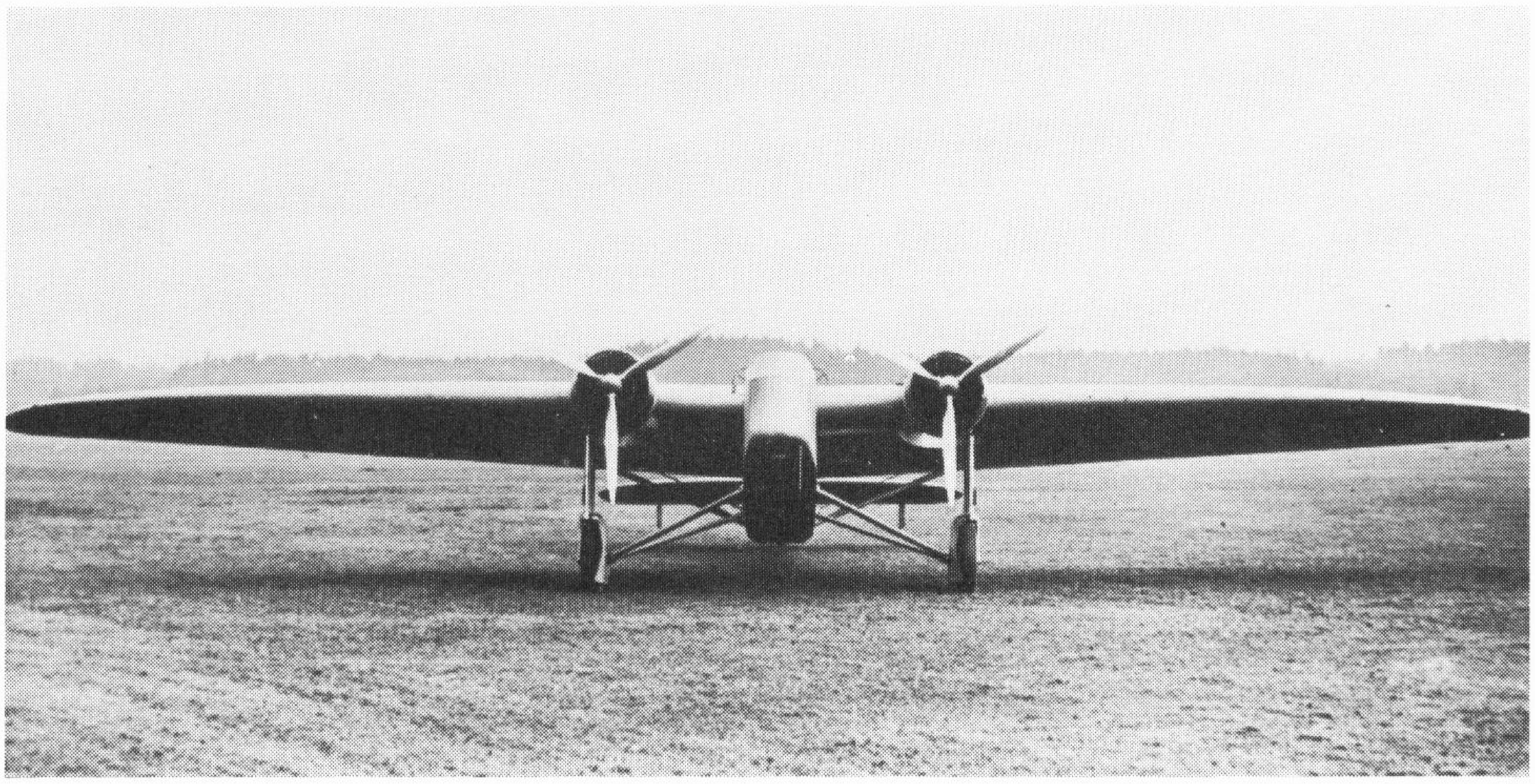


but it retained the same fuselage, wings and tail unit as the earlier variants; some were handed over to the Bulgarian Air Force. The *Reichsbahn* was equipped with some Do 11D 'freighters', e.g. D-3077, D-3082 and D-3086, for training prospective *Luftwaffe* personnel in long-distance and night flying and also in conditions of bad weather.

17. The first prototype Do 13 was ready for its maiden flight at Löwenthal, near Friedrichshafen, on 13 February 1933. Only a small number of these aircraft were built, and all flew with four-bladed propellers powered by BMW Jupiter VI engines. The Do 13 could reach an altitude of 10,500ft and had a range of 750km.

18. Only one Do 13C was completed. The aircraft was similar to the A variant but was fitted with the more powerful BMW VIU engine. It experienced a number of technical problems, and was lost when a wing broke off during a test flight. The Do 13E and F were flown with water-cooled BMW engines. All four Do 13s were built for the *Reichsluftfahrtministerium* (RLM).



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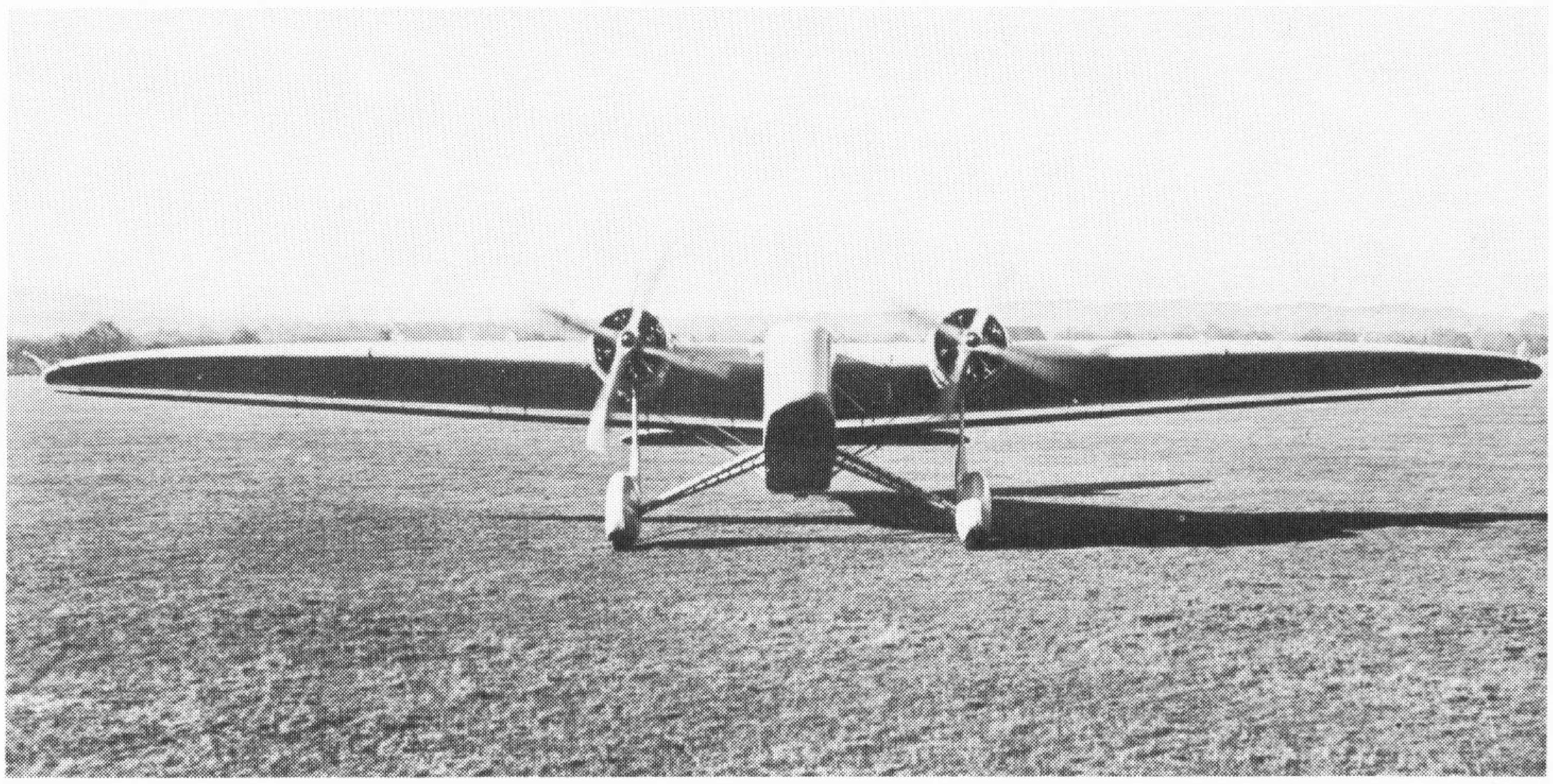

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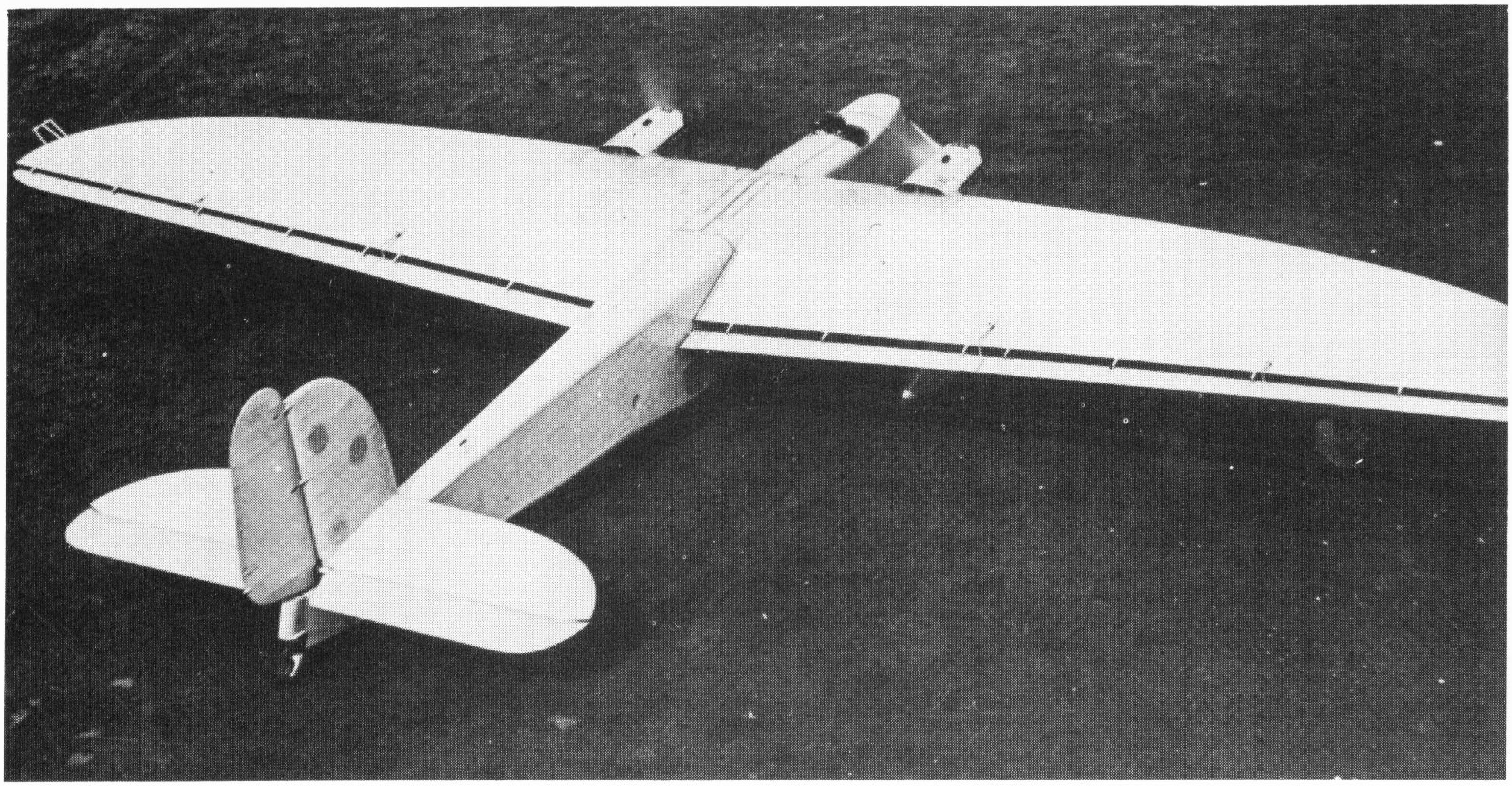

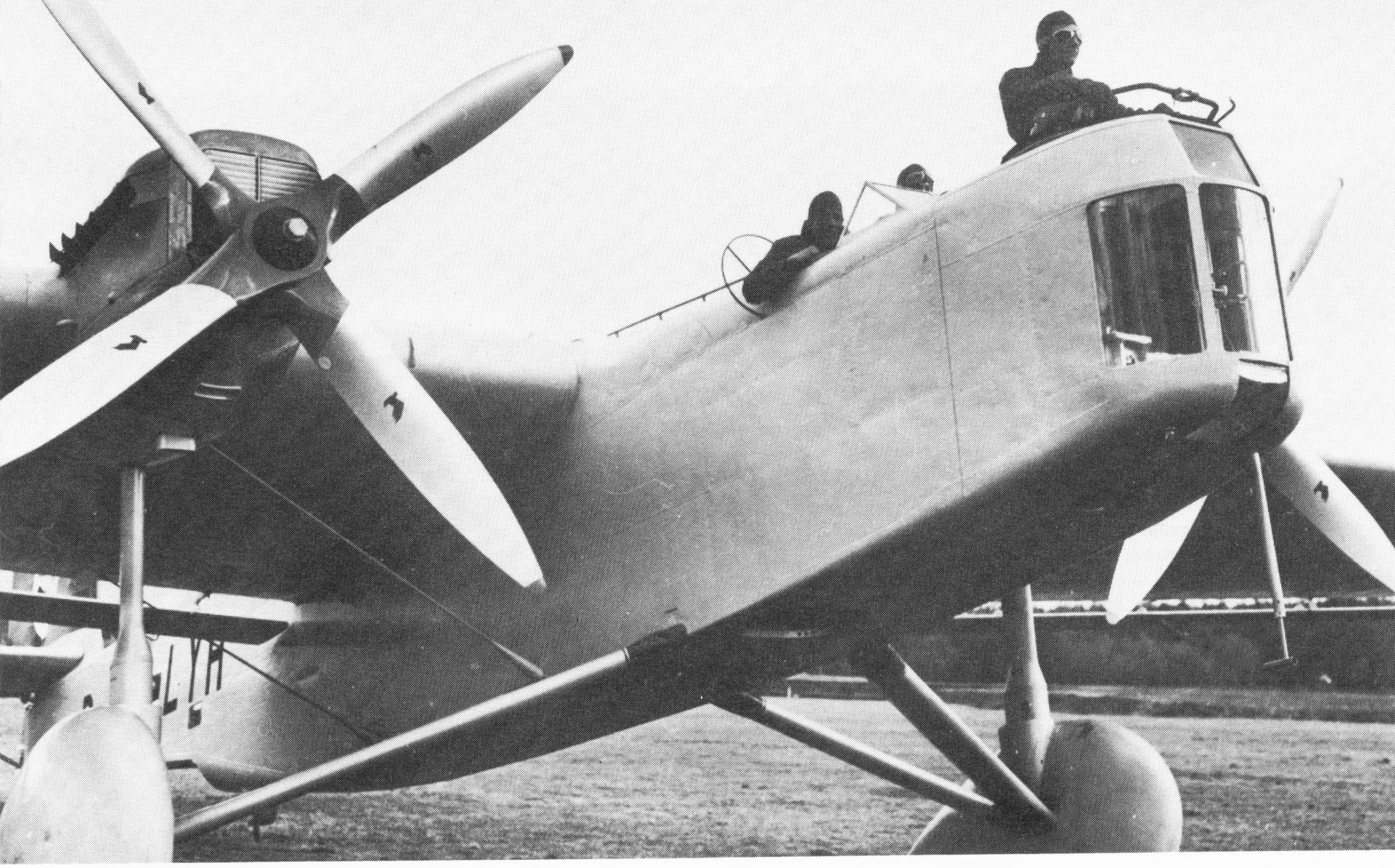

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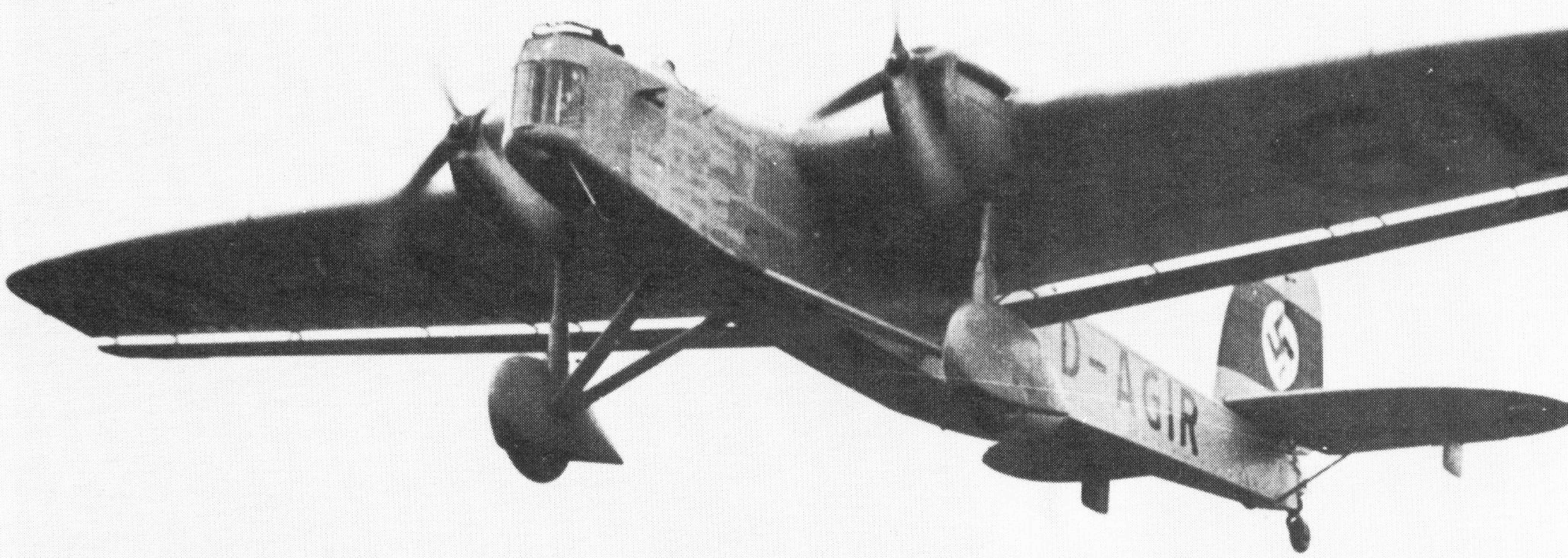

19, 20. The Do 23 followed the Do 13F and featured a modified wing with a reduced span. The first prototype was flown on 1 September 1934, and, after trials with the Curtiss Conqueror-engined Do 23E, series production got under way with the all-metal F, powered by 750hp BMW VIUs. One aircraft, D-AGIR, was flown with Rolls-Royce engines, and production of the Do 23G began with *WerkNr* 387.

21, 22. Do 23F and G production lines were set up at Manzell and Wismar (Dornier), Berlin-Johannisthal (Henschel) and Hamburg-Finkenwerder (Blohm und Voss). Between 1934 and 1936 a total of 272 aircraft were produced, and these were delivered, in the main, to the first *Kampfgruppen* of the newly formed *Luftwaffe*. The first Do 23 arrived at Giebelstadt at the end of 1935, replacing the Ju 52/3m *'Befehlsbomber'* of I/KG 155 (*'Kampfregiment Ulm'*).

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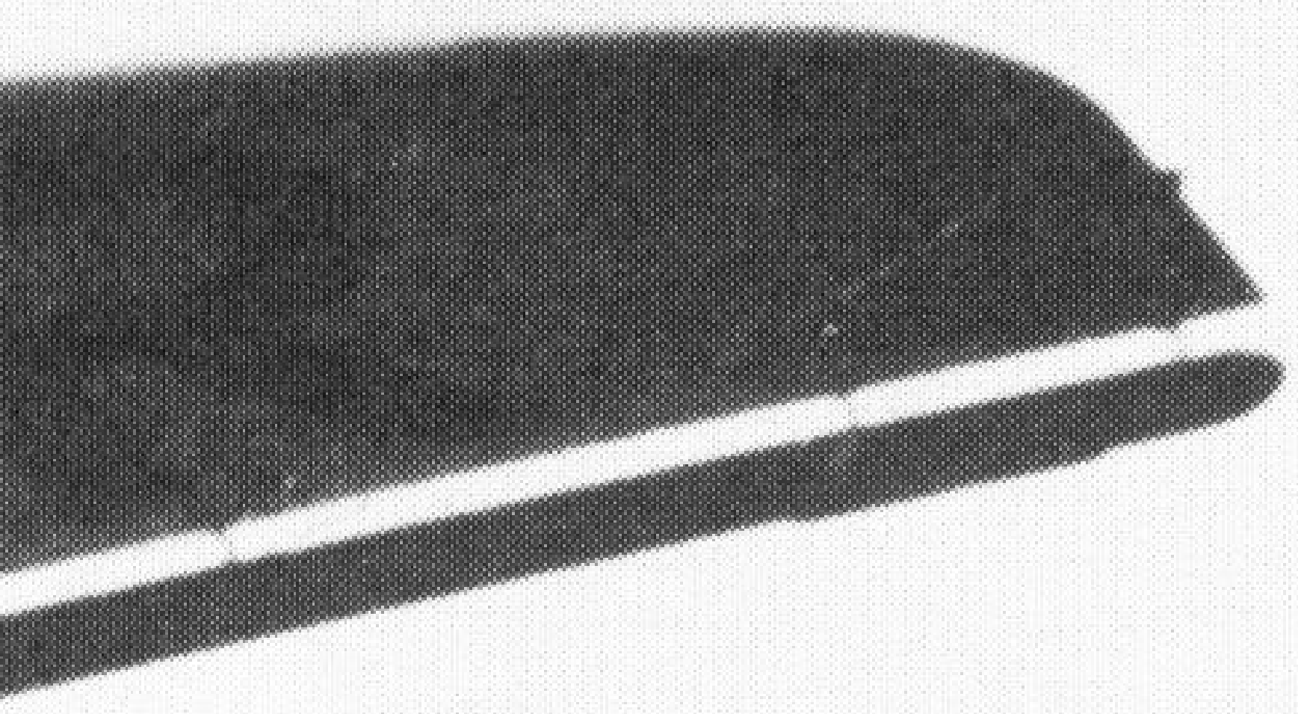

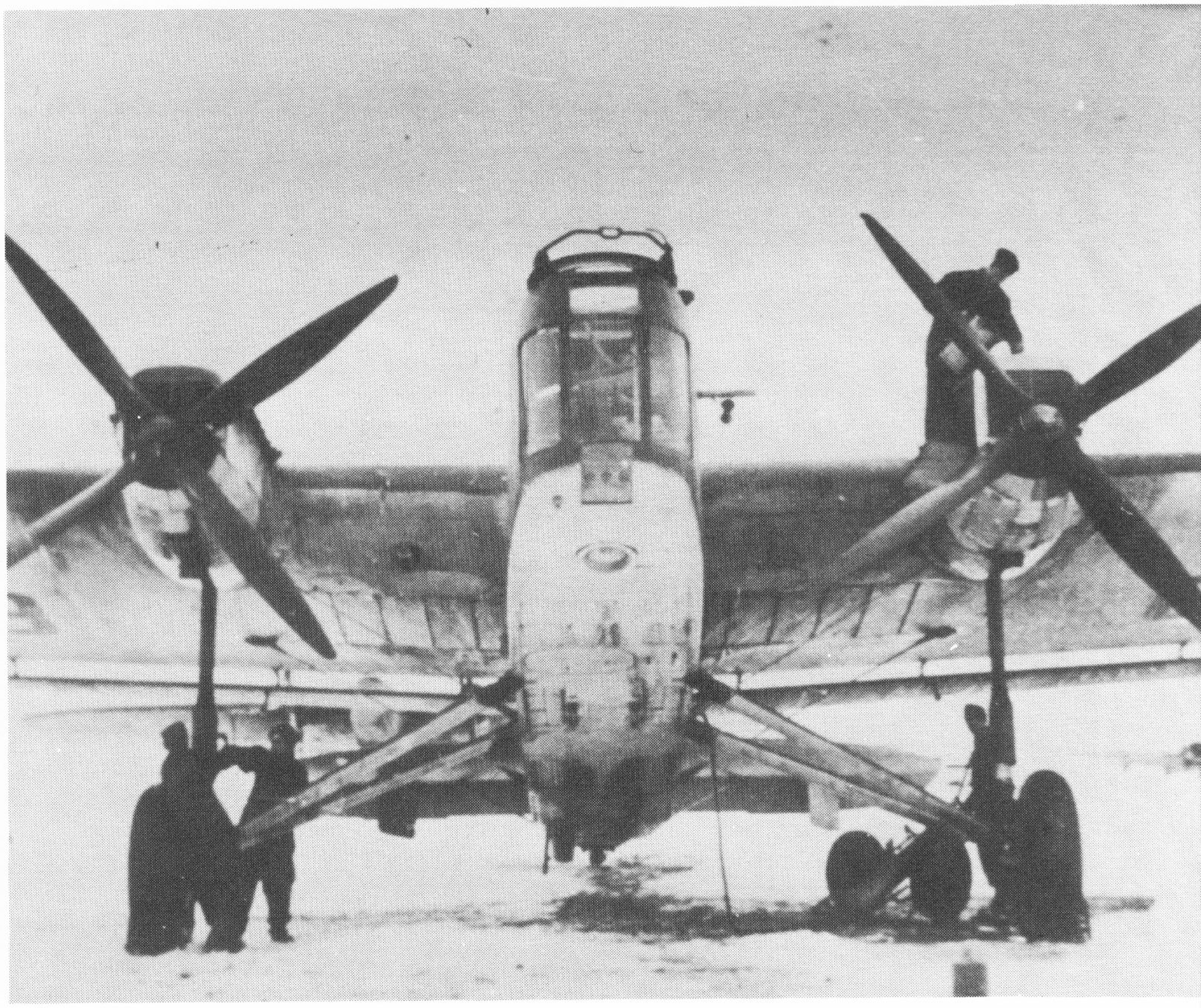

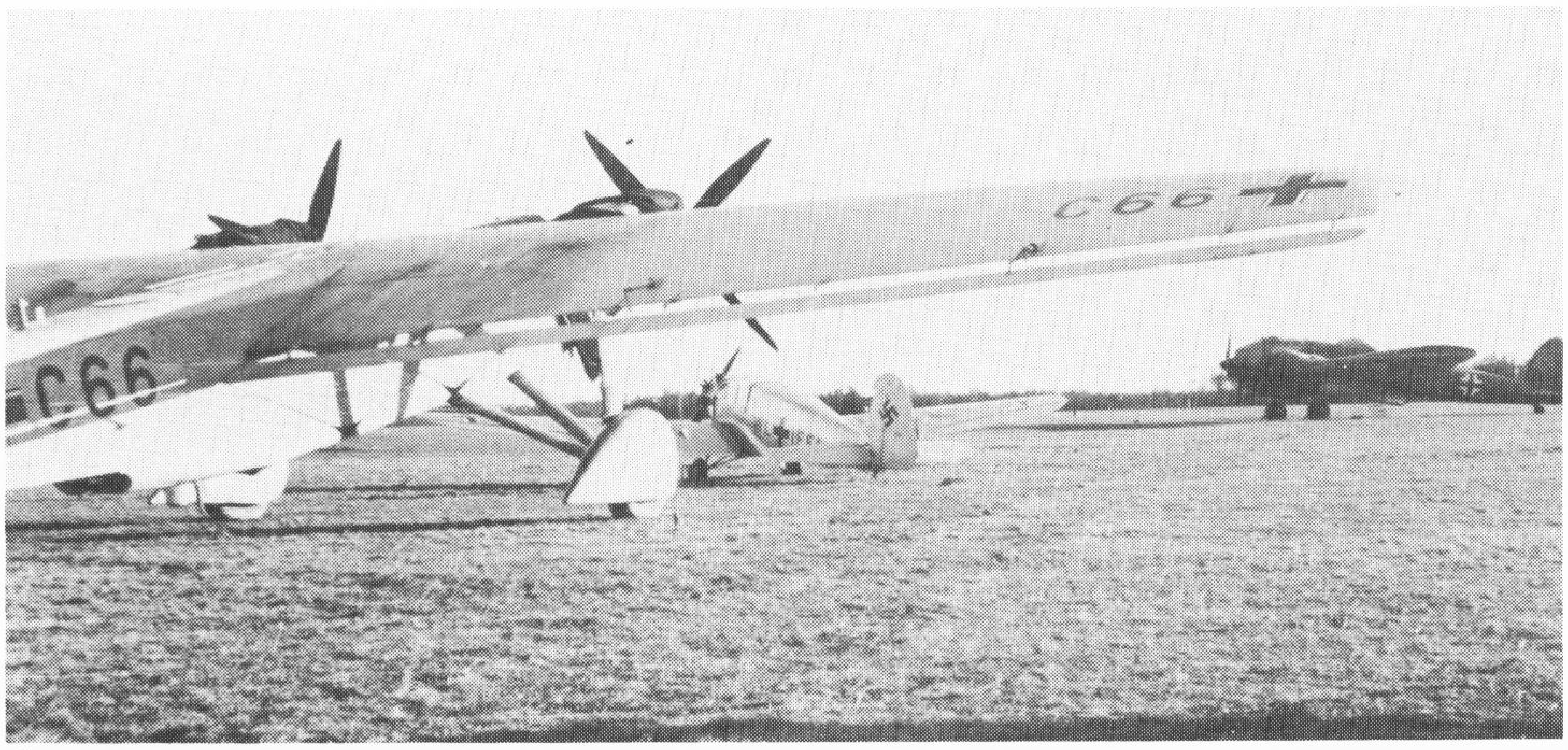

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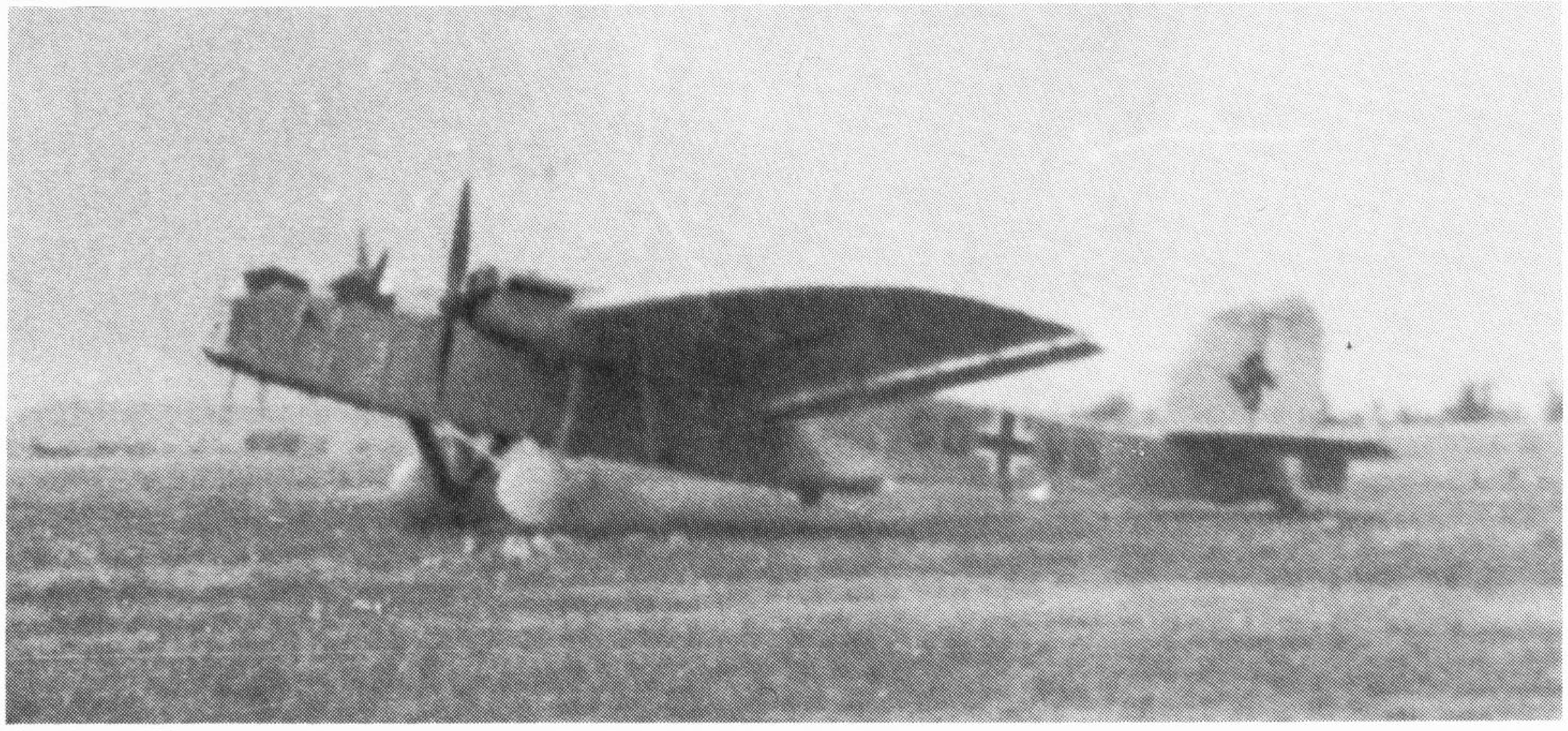

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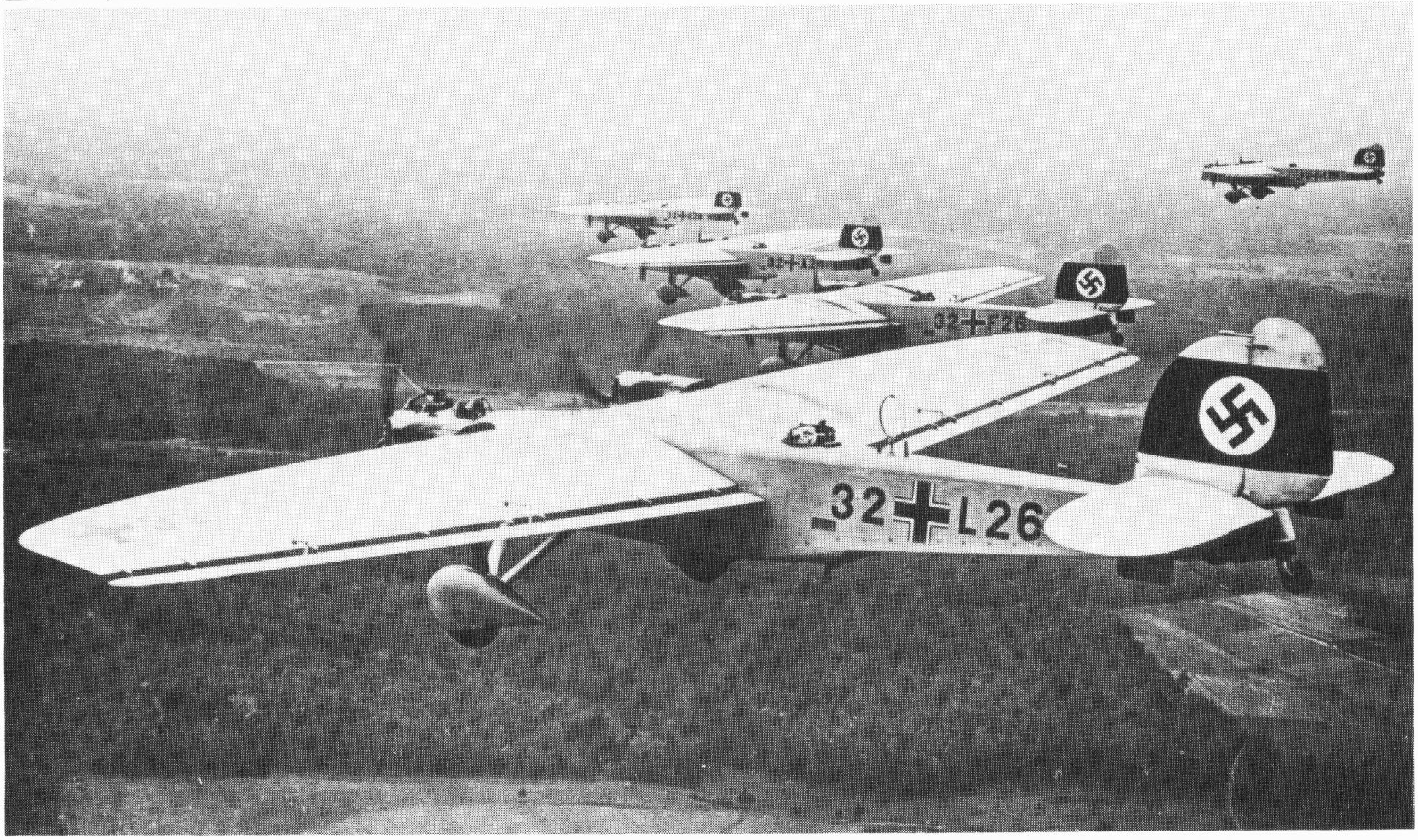
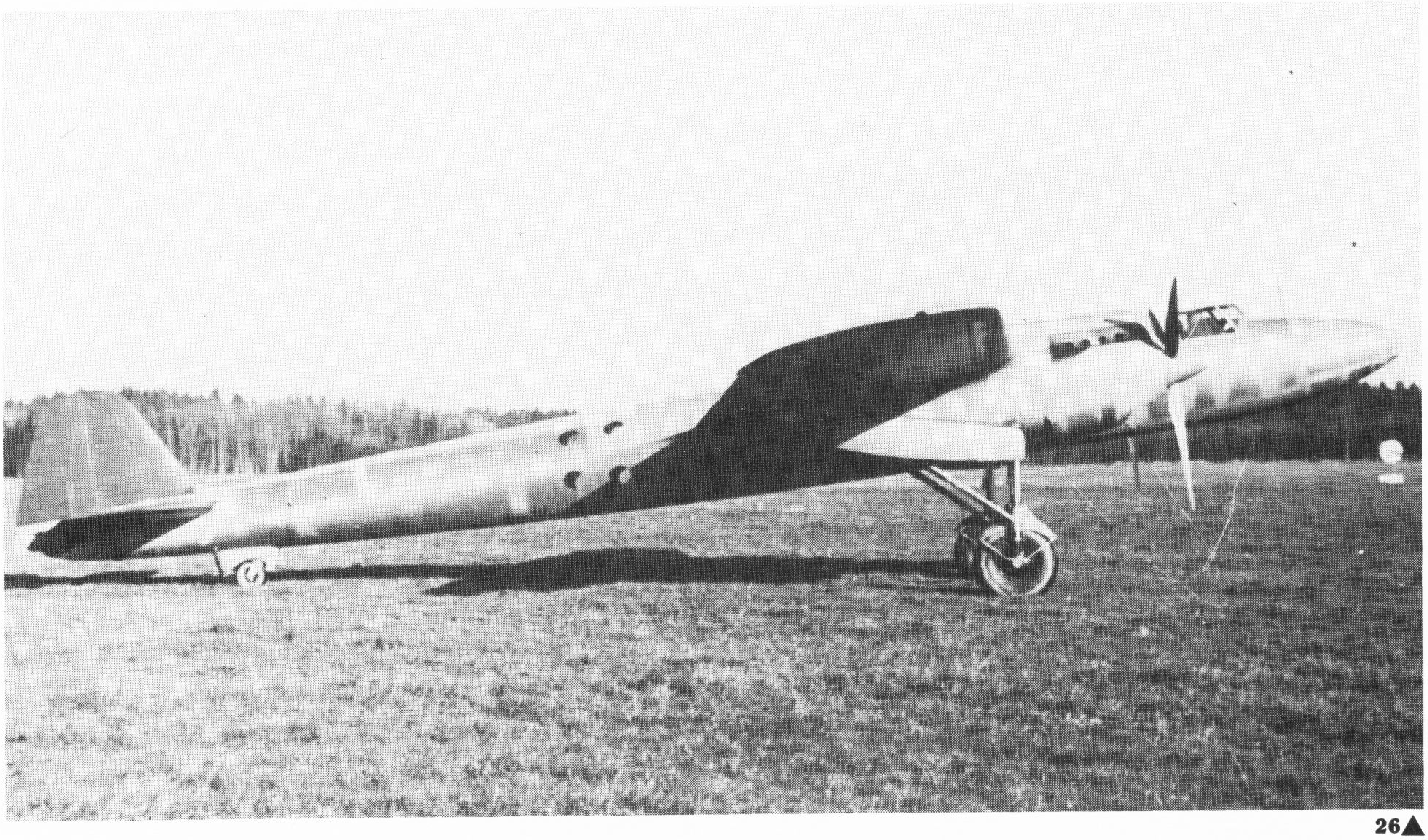
23, 24. In the late 1930s, most of the Do 23s were transferred to the *Schulgruppen* of the *Luftwaffe*. The aircraft were painted up in standard camouflage and markings, but just after the outbreak of war most received the *Funkrufkennzeichen*, consisting of four letters to the left and right of the *Balkenkreuz* national marking.



25. A formation of five Do 23s, photographed en route to a *Reichsparteitag* in Nuremberg; many *Luftwaffe* units took part in these political rallies during the rise of the NSDAP. These four-seat bombers became an important component of KG 143 which was established on 20 April 1934; other Do Fs and Gs joined KG 252 in Tutow. The unit which later became famous as the *'Blitz-Geschwader'* received Do 11s and Do 23s in 1935 and 1936 during the build-up of two *Gruppen* at Merseburg and Fürstenwalde near Berlin. KG 153 was later equipped with the Ju 86, and parts of this unit subsequently became I/KG 77 and KG 3, which received the Do 17Z.



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26. The forerunner of some 2,036 Do 17s, 140 Do 215s and 1,630 Do 217s took off for its maiden flight on 23 November 1934, the Do 17 V1 (D-AJUN, *WerkNr* 256) being the prototype for the proposed C series. This unarmed aircraft was flown by *Flugkäpitan* Egon Farth, Dornier's chief pilot, but it crashed on 21 December 1935.

27. The Do 217 V2 (D-AHAK, *WerkNr* 257) had the now familiar twin tail and was first flown on 18 May 1935; it was quickly followed by the third Do 17, *WerkNr* 258 (D-ABIH), equipped with a pair of BMW VID engines and two 20mm machine guns. This latter machine was later flown as a so-called *'Sonderflugzeug'* ('special aircraft').

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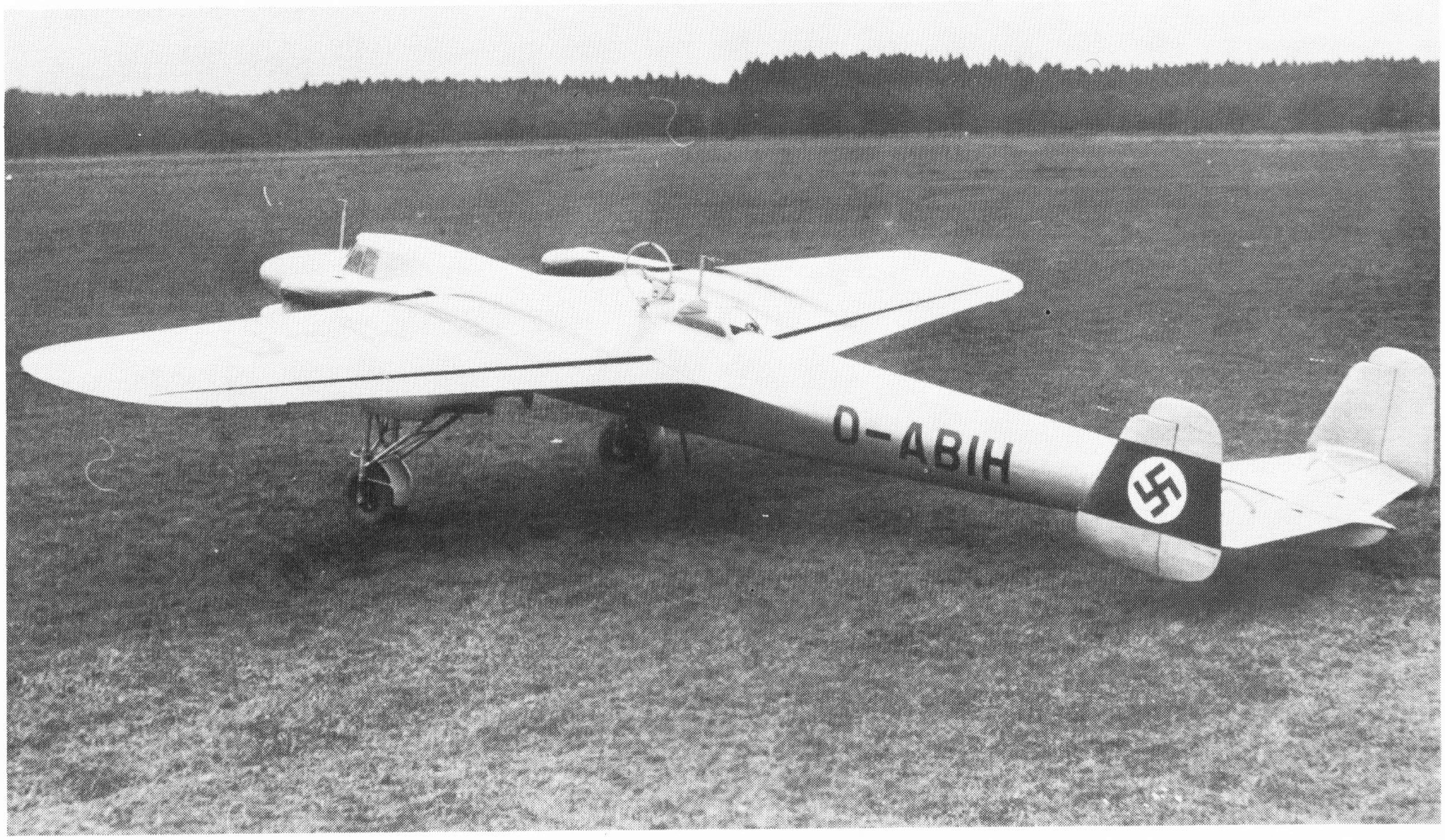

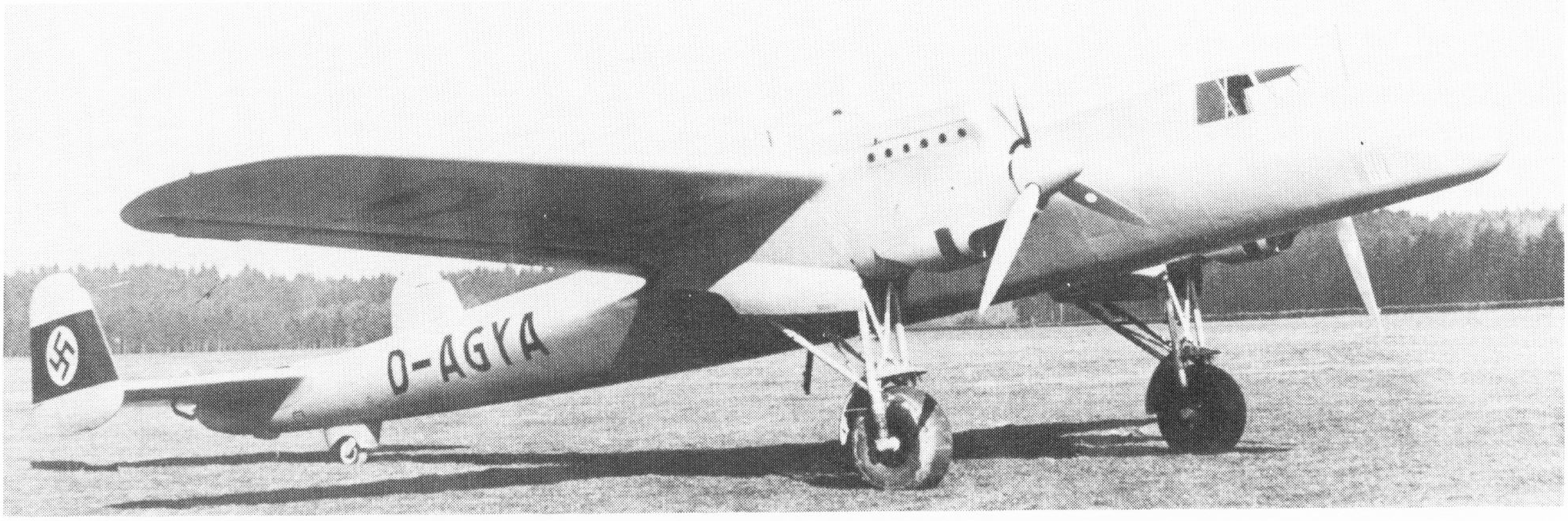

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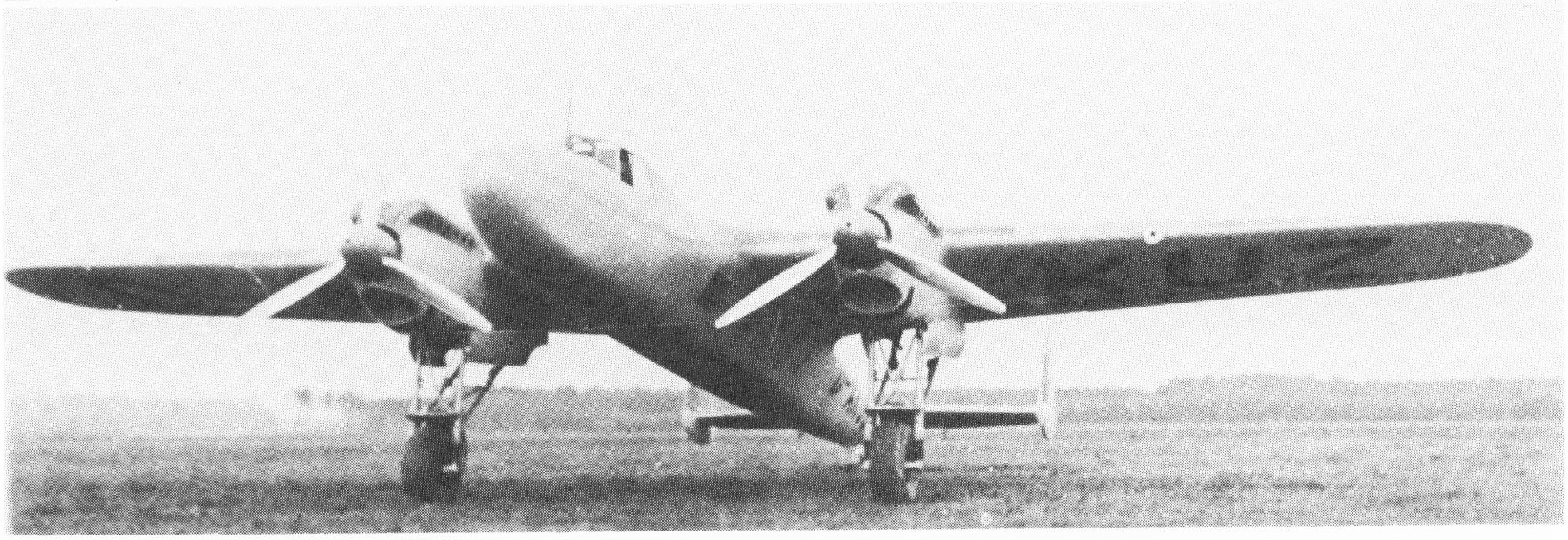

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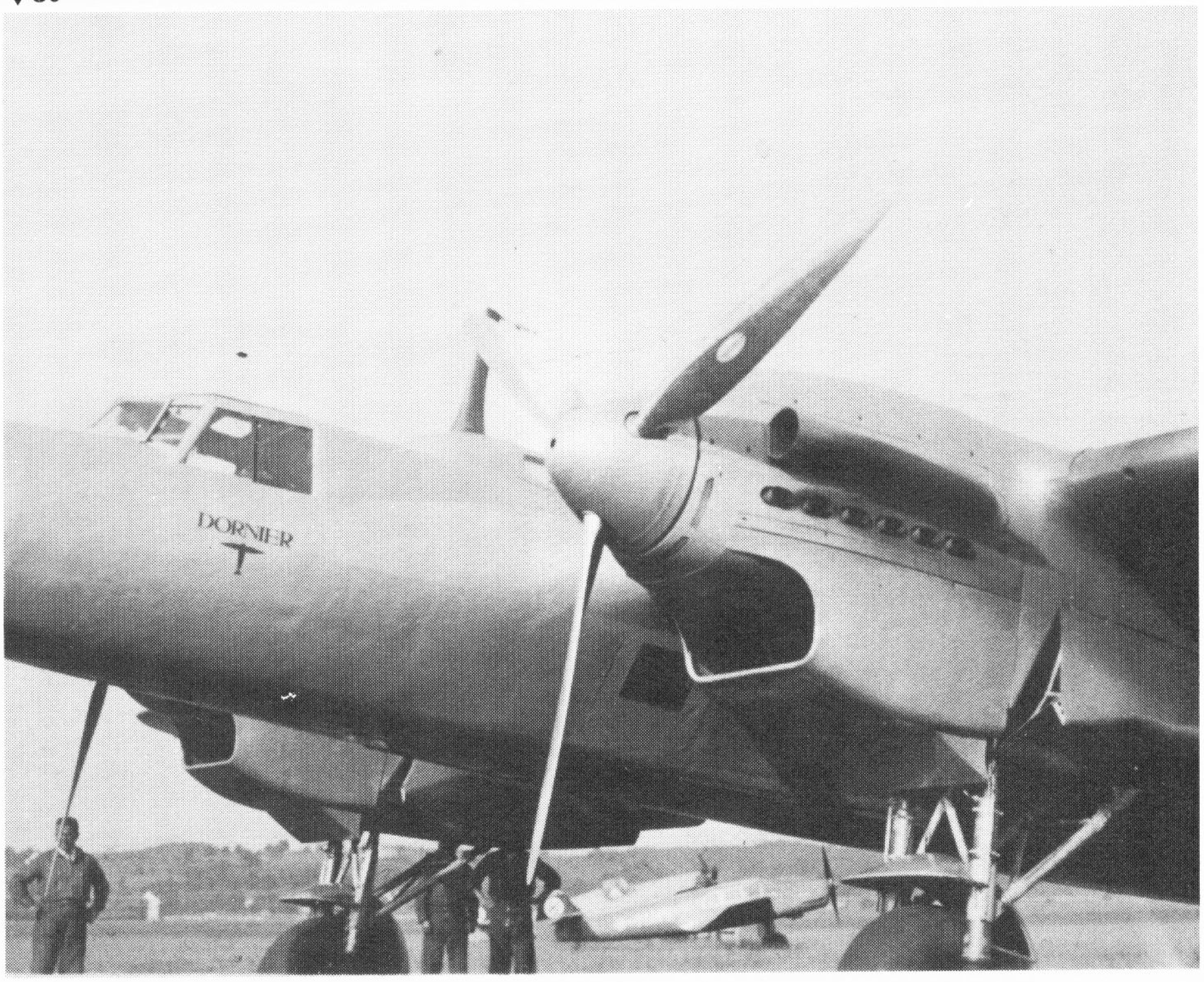
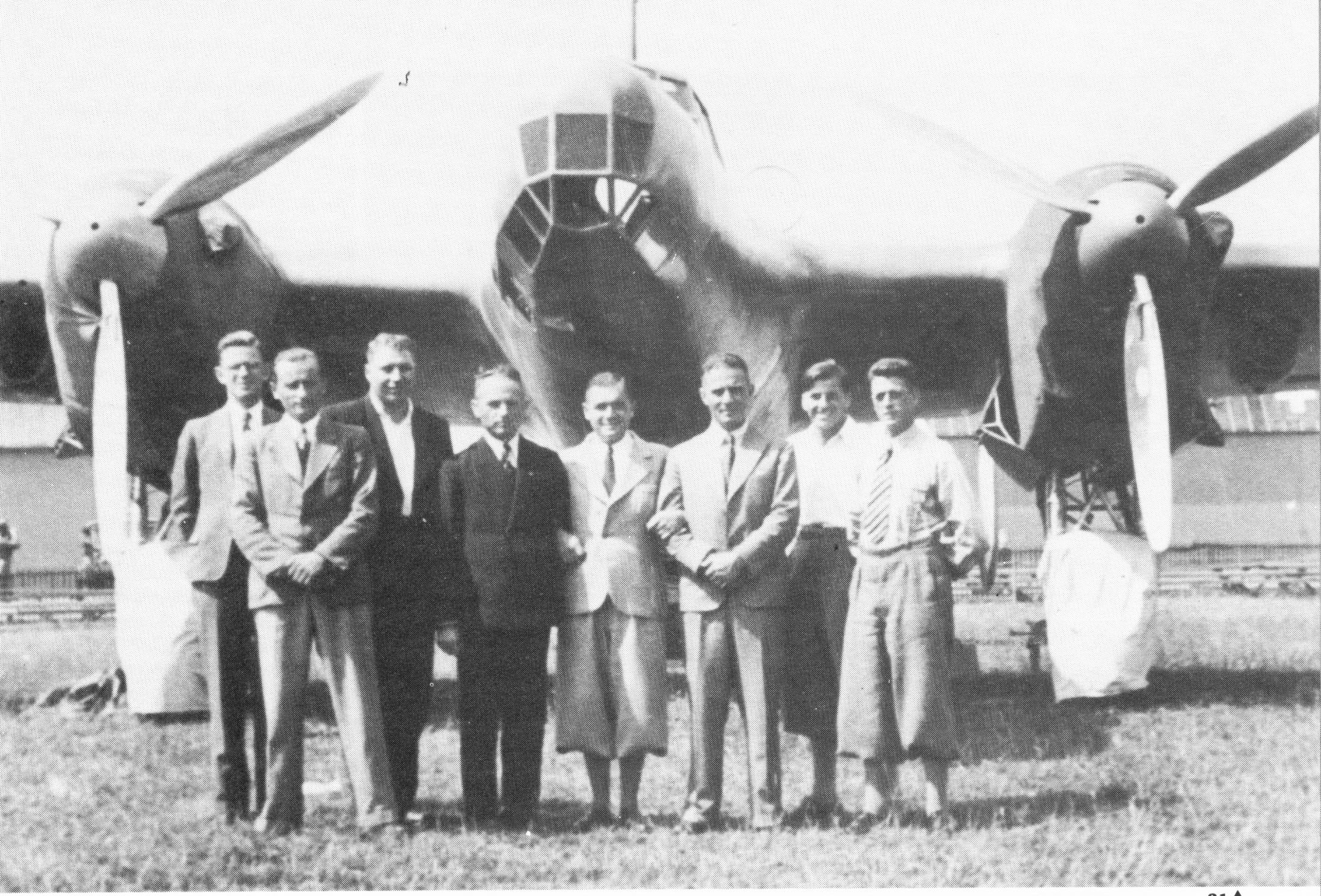
28. The fourth prototype, the Do 17 V4 (*WerkNr* 654, D-AGYA), was similar to the third aircraft but featured a redesigned nose. It was used as a test-bed, fitted with two machine guns or cannon.

29. D-AKUZ was the sixth prototype Do 17 and later received the military code GL+AJ. The aircraft was employed by the RLM as a fast transport and was the only Do 17 built exclusively for that purpose by Dornier. Unarmed, and powered by two BMW VIs, it was evaluated from October 1936. The *Werknummer* was 1223.





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30, 31. The Do 17 V8 (*WerkNr* 658, D-AXON) was first seen in public during the 1937 *International Flugmeeting* at Zúrich. Powered by two BMW VID engines, it was ostensibly a three-seat fast reconnaissance aircraft, but following its maiden flight on 10 September 1936 it was transferred to Rechlin that December where, for high-altitude missions, three oxygen systems were installed. The Do 17 V11 later became the first Do 17F-2, an improved F-1.

32. The DB 600-powered Do 17M V1, *WerkNr* 691 (D-AELE, GL+AL), was also designated the Do 17 V8. It performed superbly as a medium bomber at Bückenburg in October 1936 and at the Zürich *Flugmeeting* of 1937. The aircraft was later rebuilt, flying for *Deutsche Forschungsansalt für Segelflug* (DFS) until the winter of 1945. The second Do 17M, or M V2 (*WerkNr* 692, D-AUQO), was another bomber variant, used for development work in 1937–38.

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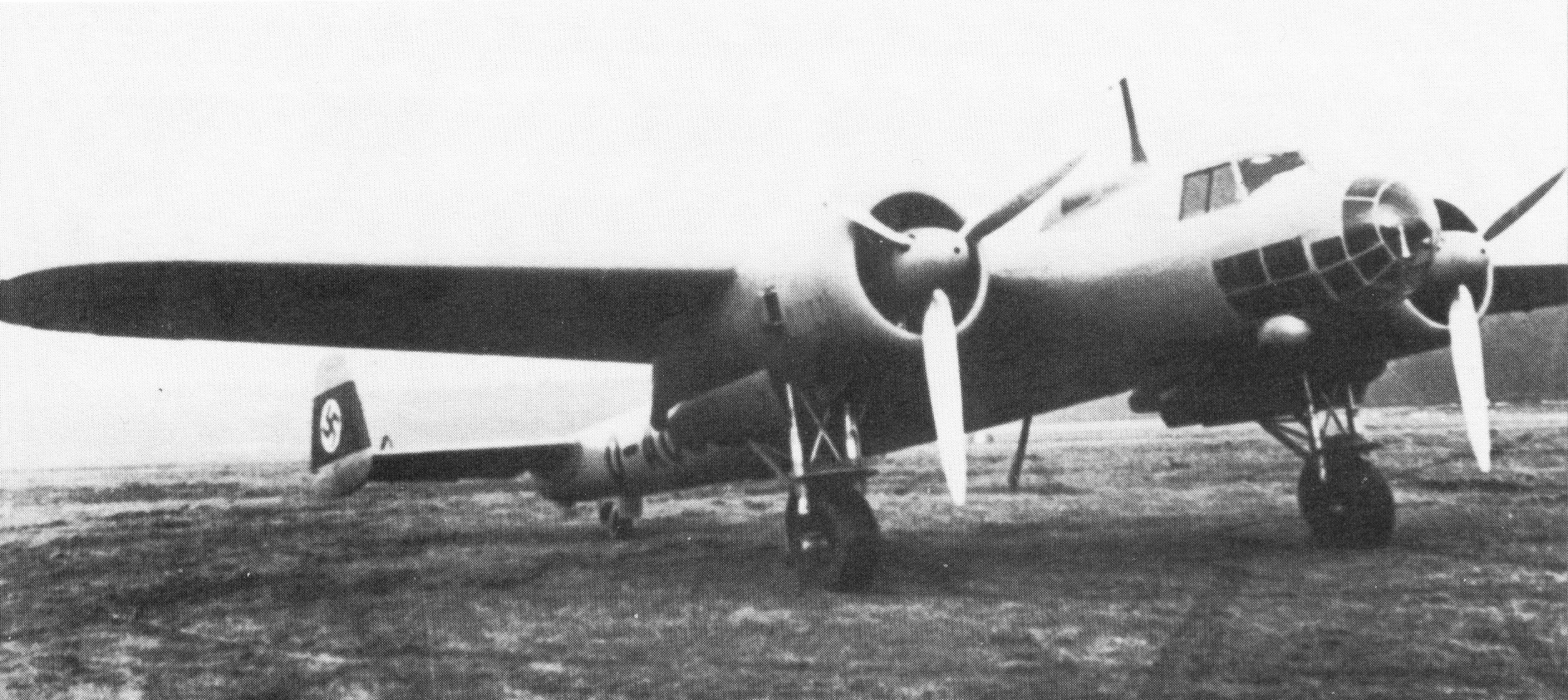
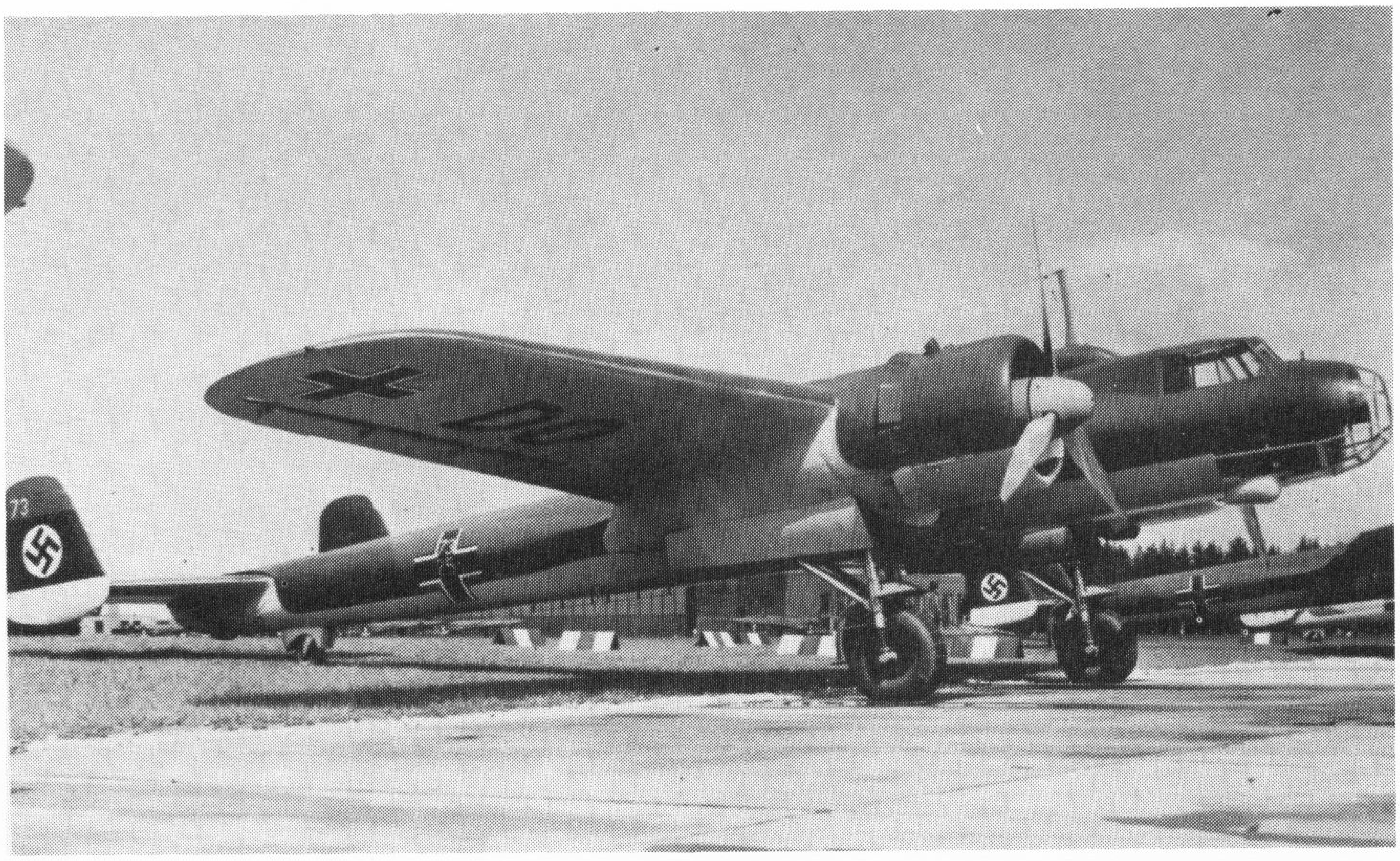


33, 34. During the first year of production, only 67 Do 17s left the assembly lines, but one year later, by the end of 1937, 473 had been delivered, only a small number of which found their way to civil operators. The Do 17M shown here came from the Löwenthal production line near Friedrichshafen on Lake Constance. On completion, new Do 17M-1s were inspected by the BAL and then sent to the *Luftwaffe*'s *Kampfgeschwader*.



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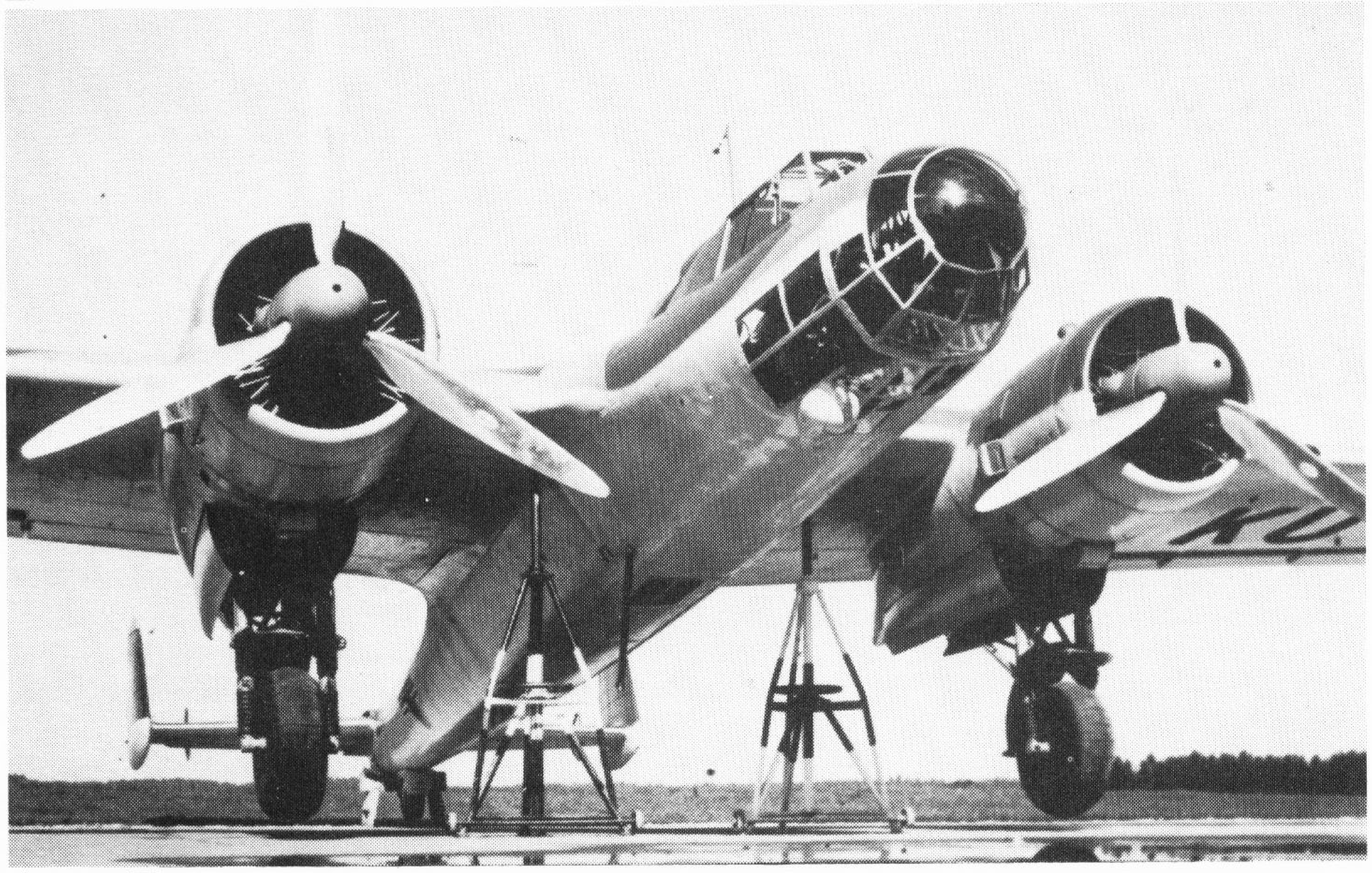

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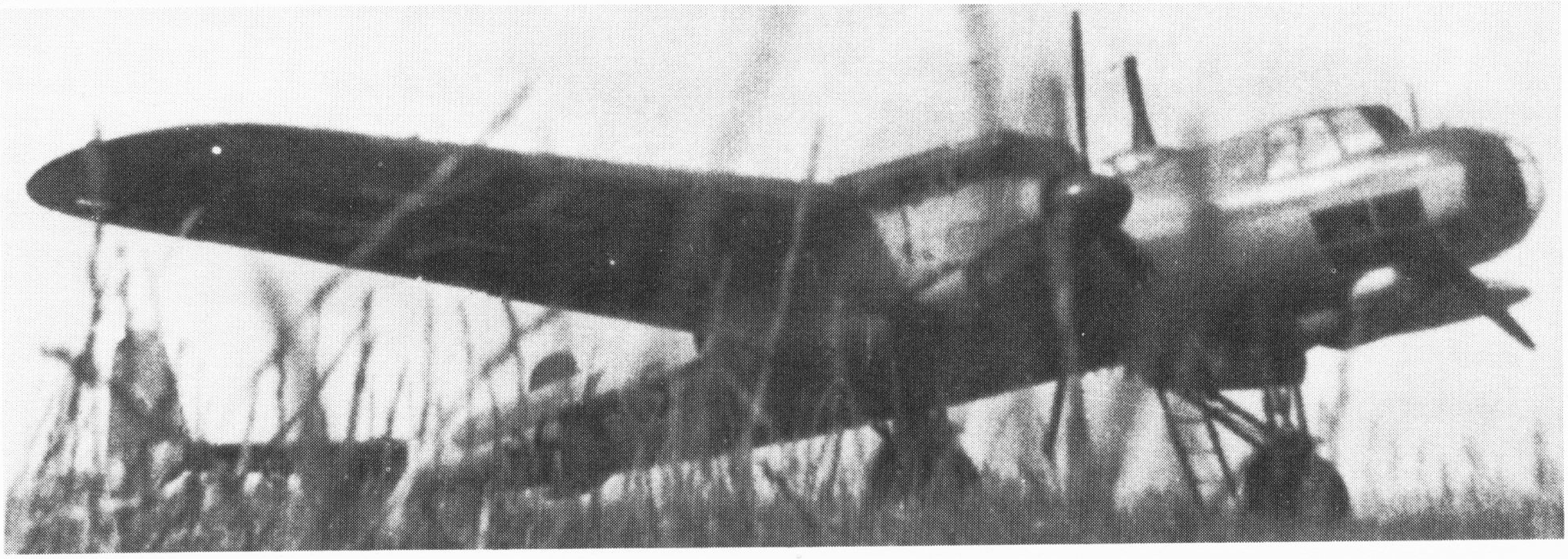
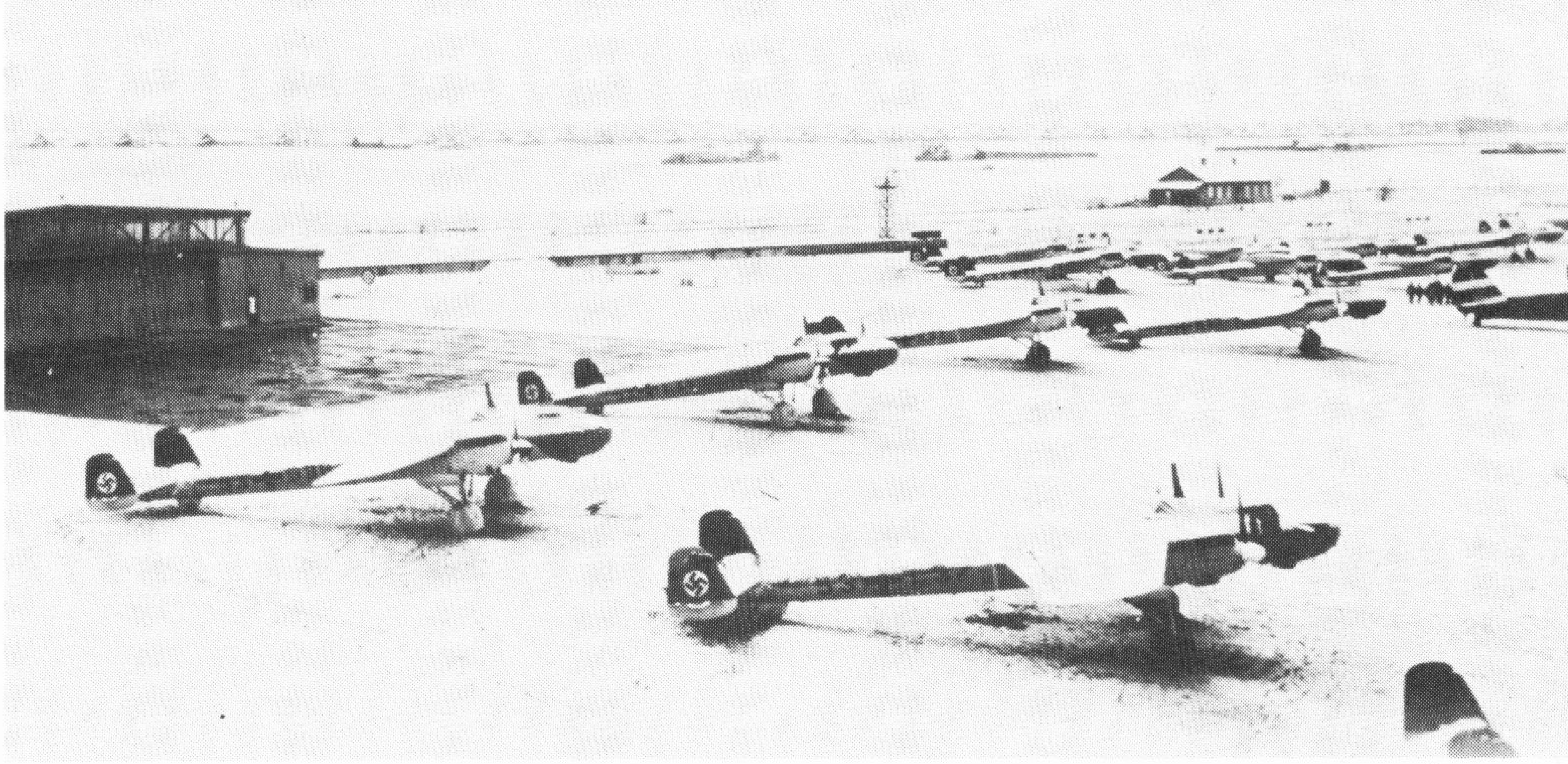
35. The Do 17E was the first major production variant of the fast Dornier bomber, powered by two 750hp BMW VID engines; the first example flew on 15 May 1936. Built also by Henschel under licence, these three-seat aircraft were armed with three MG 15s, and it was possible to fit a fourth gun in the nose glazing (Do 17E-1/U1). The E-1 shown here was flown by KG 153, which formed the nucleus of the famous KG 77.



36. The Do 17E-1s of 6/KG 155 were the first German bombers to be flown into Vienna during the occupation of Austria, arriving at 9.40 a.m. on 12 March 1938 with the *Geschwader* staff following some hours later; some of the aircraft were immediately serviced and flown on leaflet raids over the capital and Lower Austria. The Austrian Air Force was later absorbed into the *'Luftwaffenkommando Österreich'*.

37. After completing a number of special variants of the Do 17, most of which were manufactured only as prototypes, Dornier produced the Do 17R V2, powered by DB 601As, followed by the Do 17U and the Do 17S-0 with a redesigned forward fuselage, a lengthened glazed cabin (for four crew members) and two DB 600G engines. The next series saw large-scale production in the shape of the Do 17Z-1 to Z-10. The photograph shows an early Z-1 operated by KG 76.

38. Do 17Z-2 bombers of KG 76 in close formation during the *'Blitzkreig'*. The *Luftwaffe* comprised 302 *Staffeln* in August 1939 and a total of 628 Do 17s were in service; of these, 119 were Do 17Es, 257 Fs, 40 Ms and 212 Zs – all operated by bomber and long-range reconnaissance units. The Do 17Z-2 became the most important model in the Z series and was flown principally by KG 2, KG 76 and KG 77; some aircraft also flew with *Lehrgeschwader* 2.



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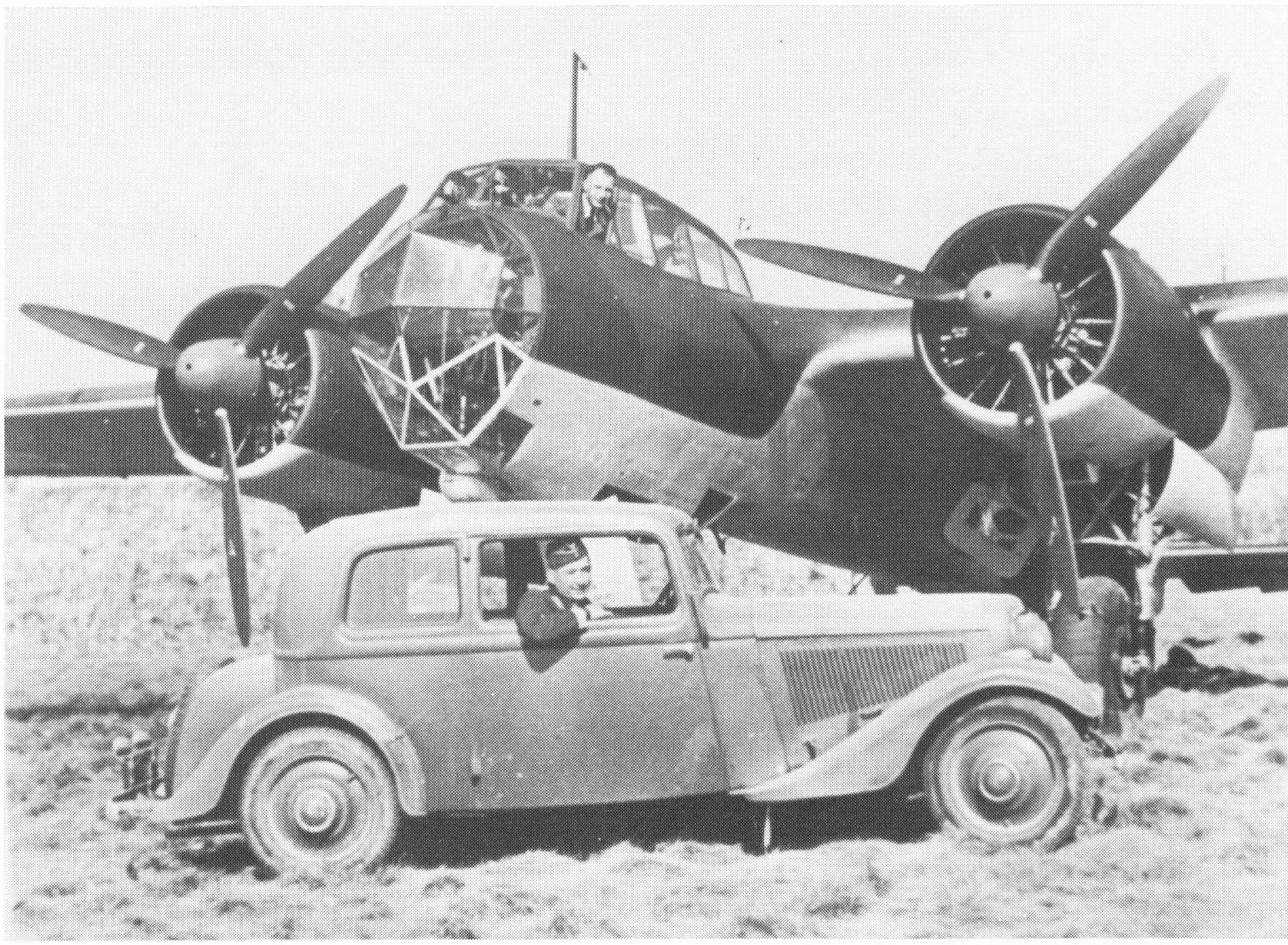

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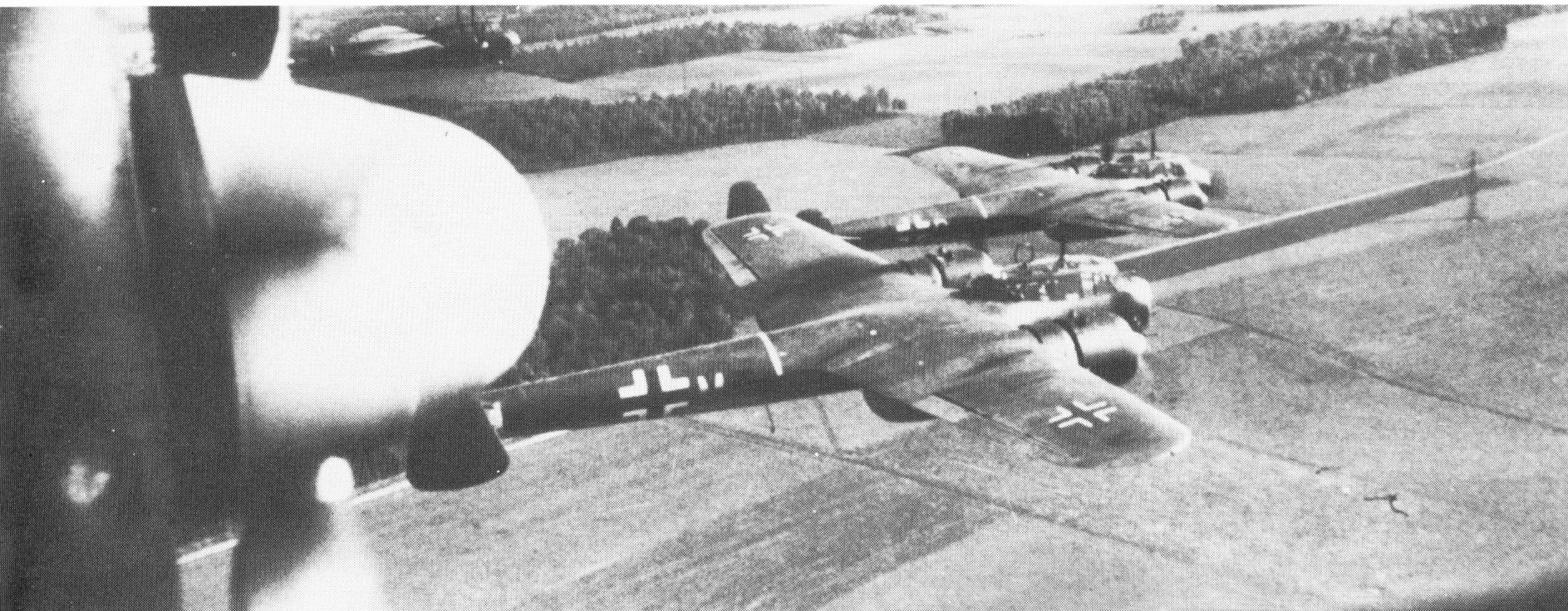

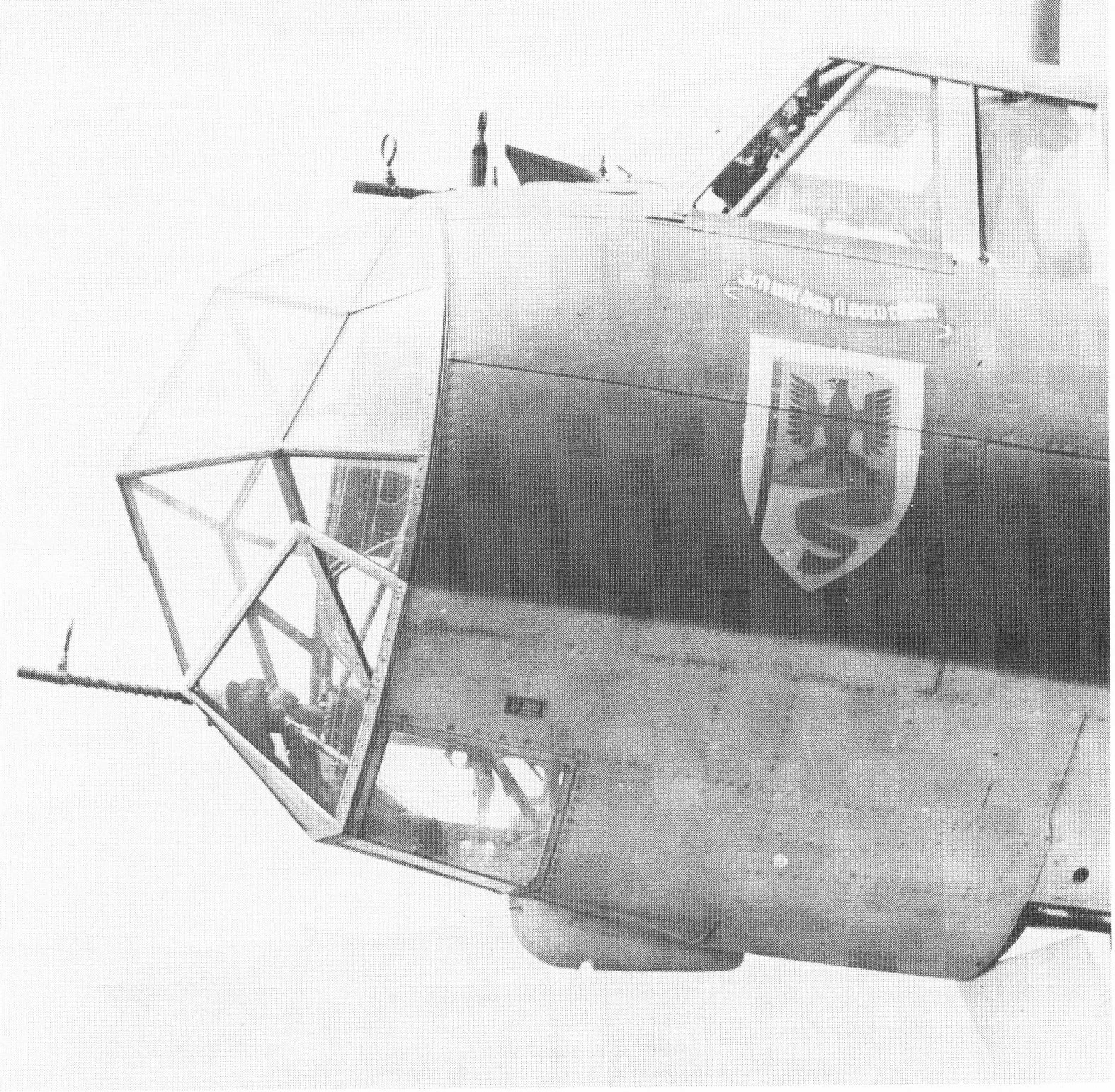

39. To Do 17Z-2 was widely used by the *Kampfgeschwader* during the campaigns in the West, although the missions against British targets were costly, many of the bombers being shot down by fighters and anti-aircraft fire. These aircraft were built by Dornier-Friedrichshafen and, under licence, by Henschel-Kassel and Junkers-Dessau. The defensive armament was heavy. The remains of one crashed Do 17Z yielded up to eight MG 15s, while in late 1940 several aircraft were equipped with the big MG FF and others received additional MGs in the nose and ventral positions.

40. The Do 17Z-5 was designed to fly over-water reconnaissance missions. The aircraft did not differ greatly from the Do 17Z-3, although it was equipped with air bags for flotation in the event of a ditching and a special survival kit was issued for the crew.

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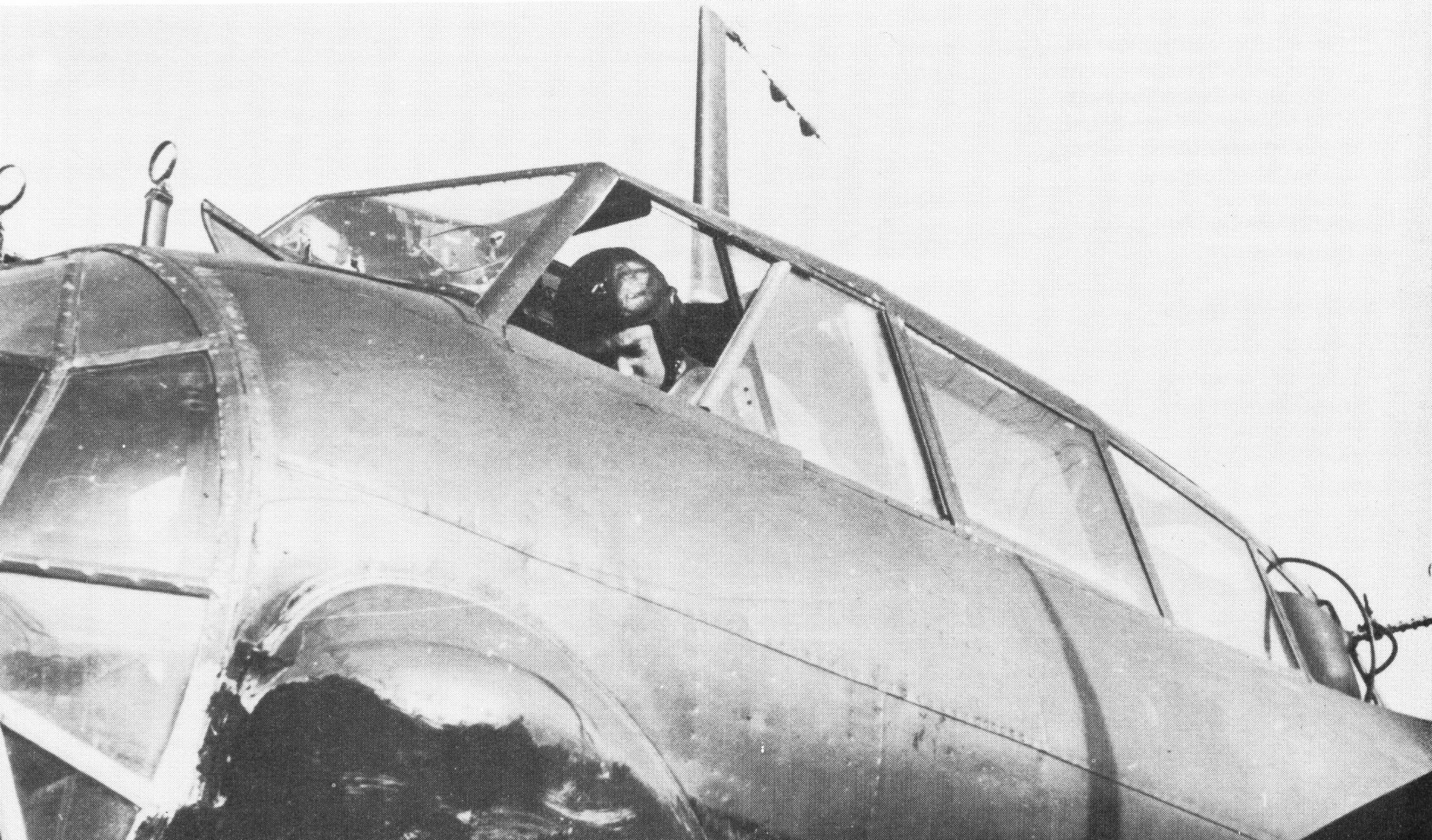
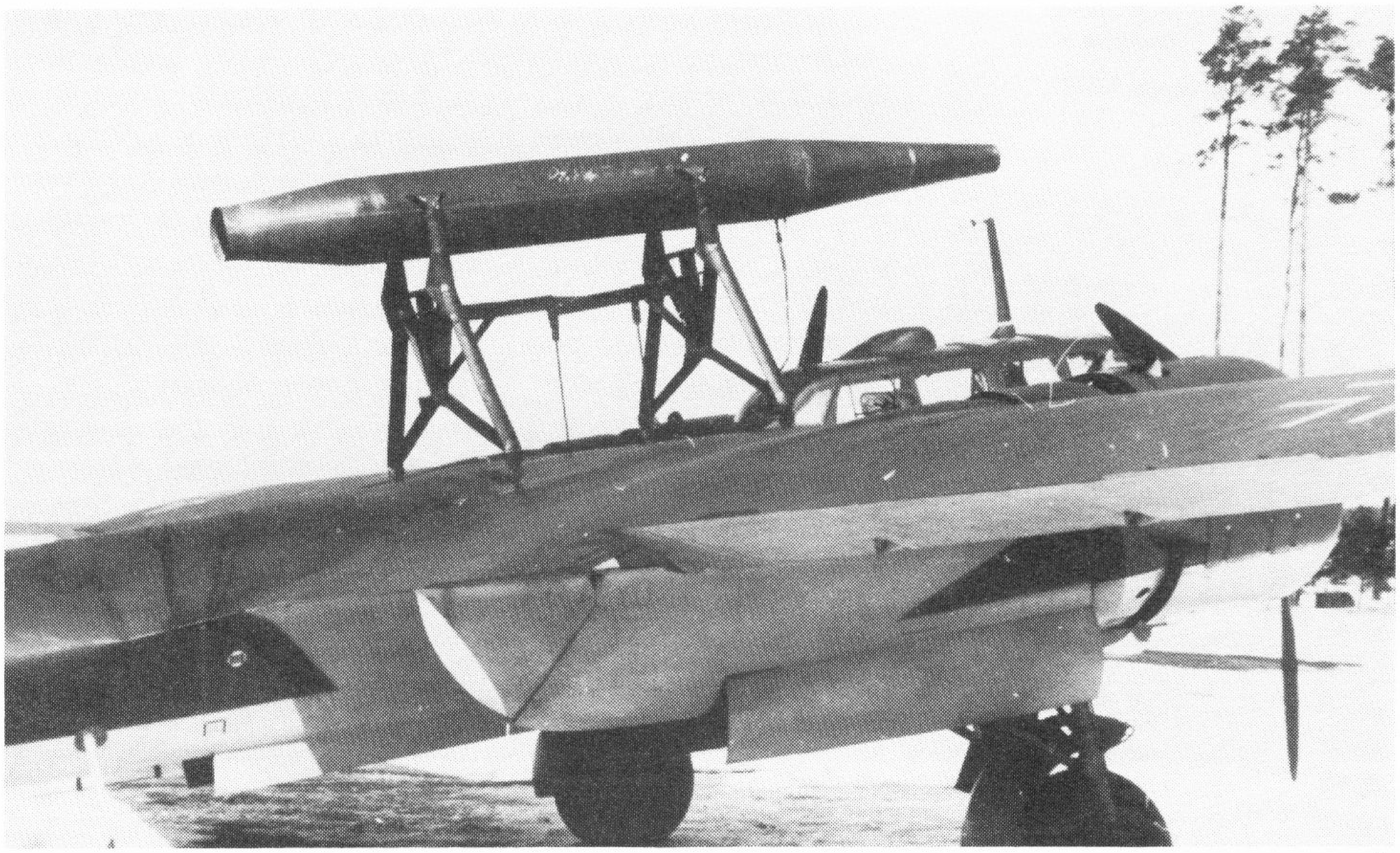


41. One Do 17Z-2 was used as a trials aircraft for Professor Eugen Sänger's ramjet. These tests were conducted at Fassberg and Ainring, and continued using a Do 217E-2 under the management of Sänger himself. In all, 70 flights were carried out with a 2400 HP tube, 40 of these taking place between 27 May and 12 June 1942. The success of the trials led to the larger 'Lorin tube' being installed on Do 217E-2s.

42. The development of the four-engined Do 19 represented a big step forward for the manufacturer. This long-range bomber was powered by four 715hp Bramo 322H-2s and was, with the Ju 89, one of the only two German aircraft to have been developed from the beginning as a strategic bomber. The Do 19 V1 (D-AGAI) first took to the air from Löwenthal on 28 October 1936.

43. The RLM took delivery of one Do 19 prototype powered by SAM 22Bs, a second with air-cooled BMW 133s (later re-fitted with BMW 135s) and a third with the same powerplant; in addition, the Air Ministry requested a single-fin tail unit, an alternative nose section and a complete wing for static tests.



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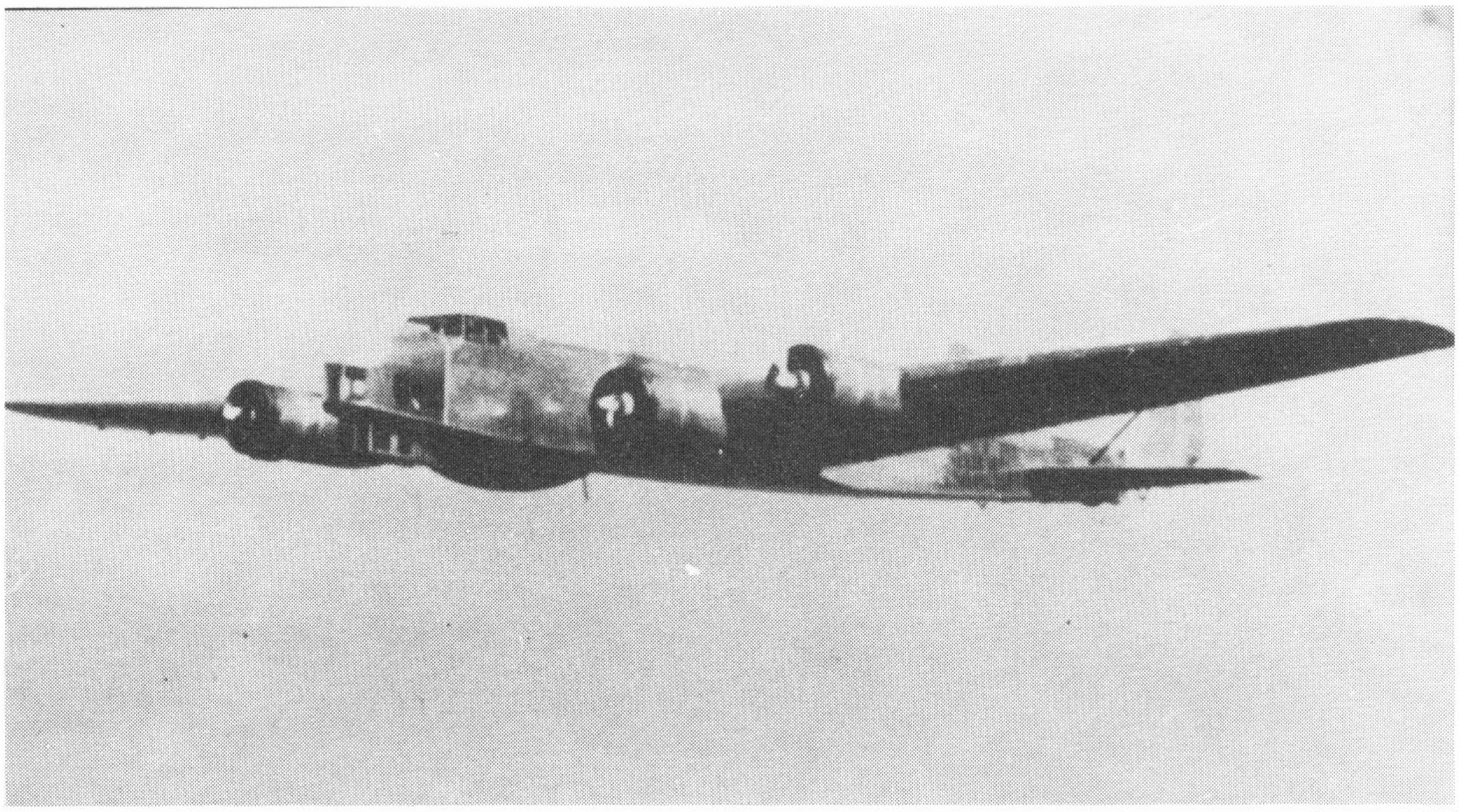

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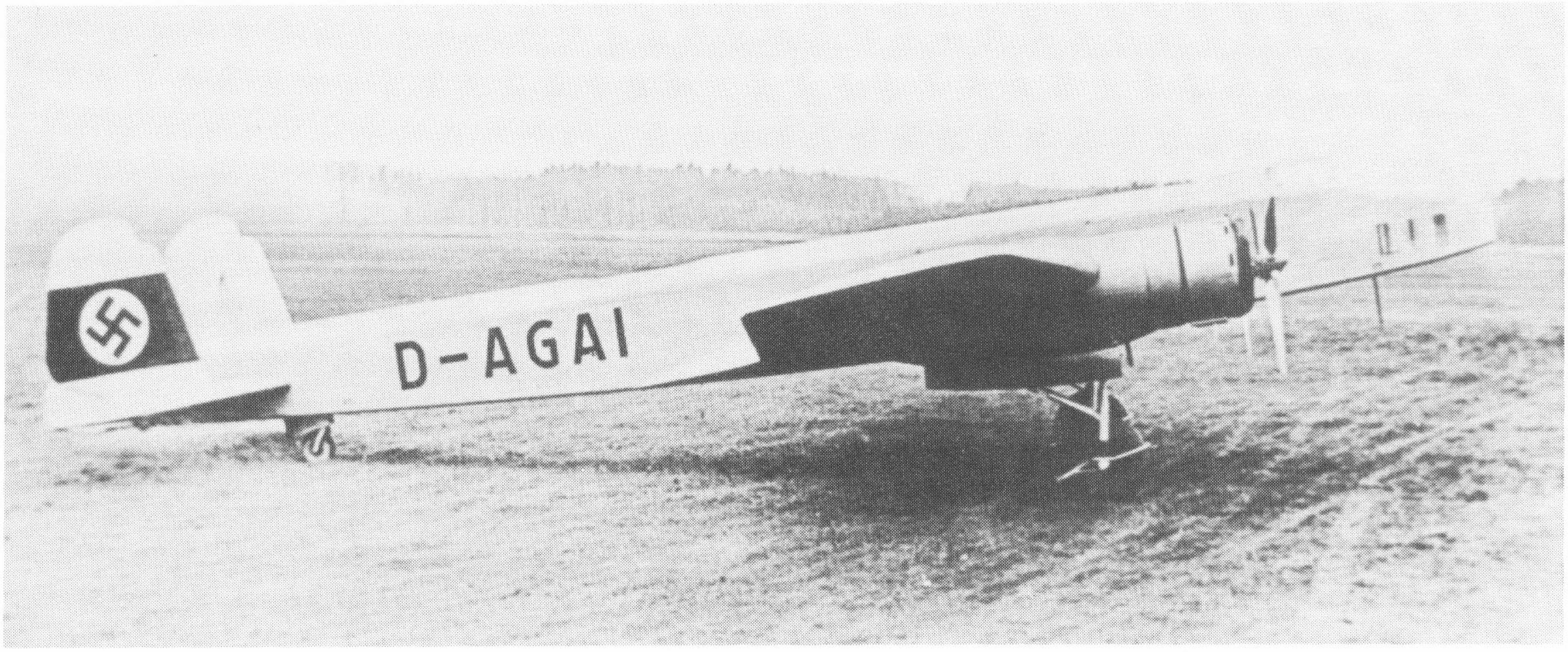

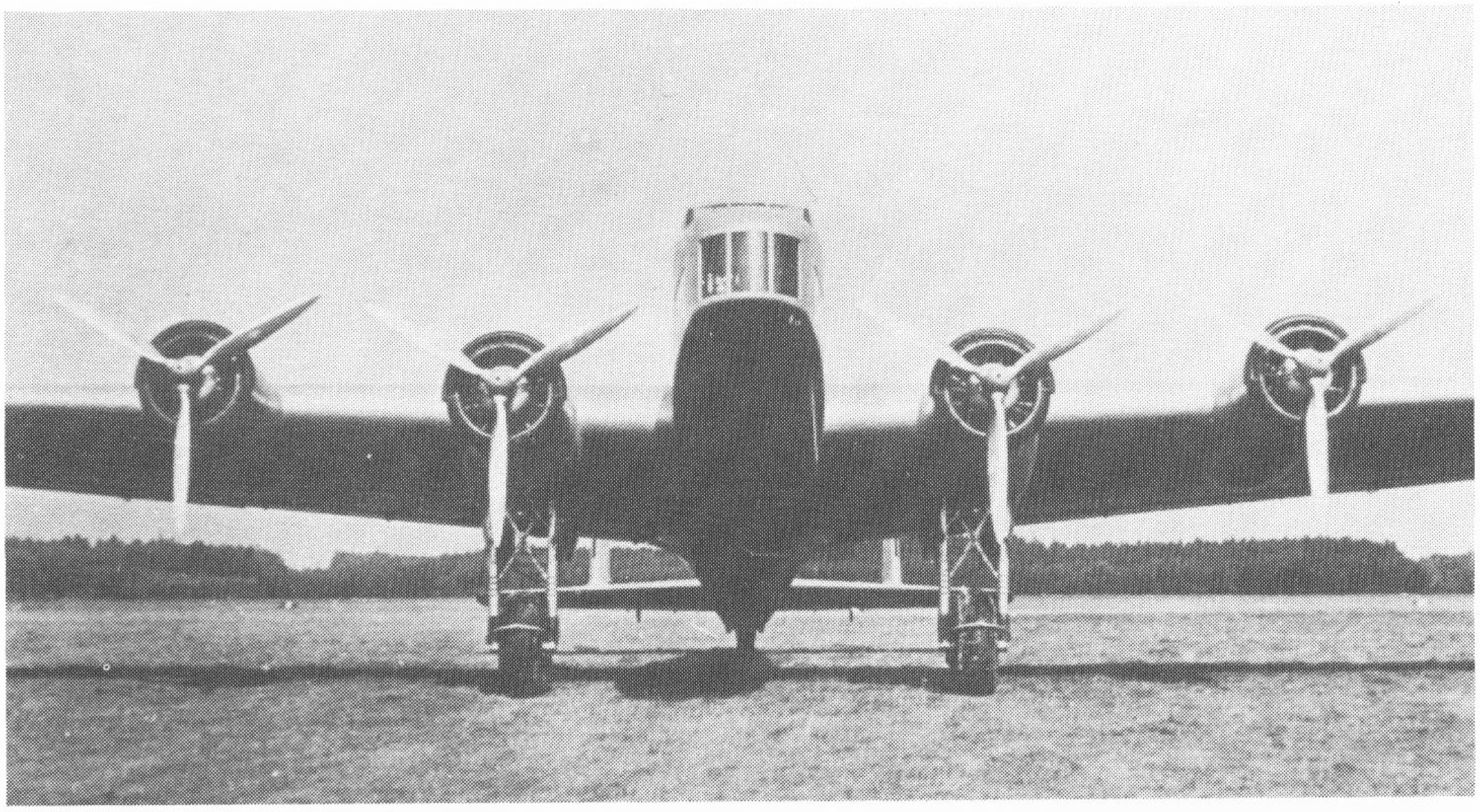

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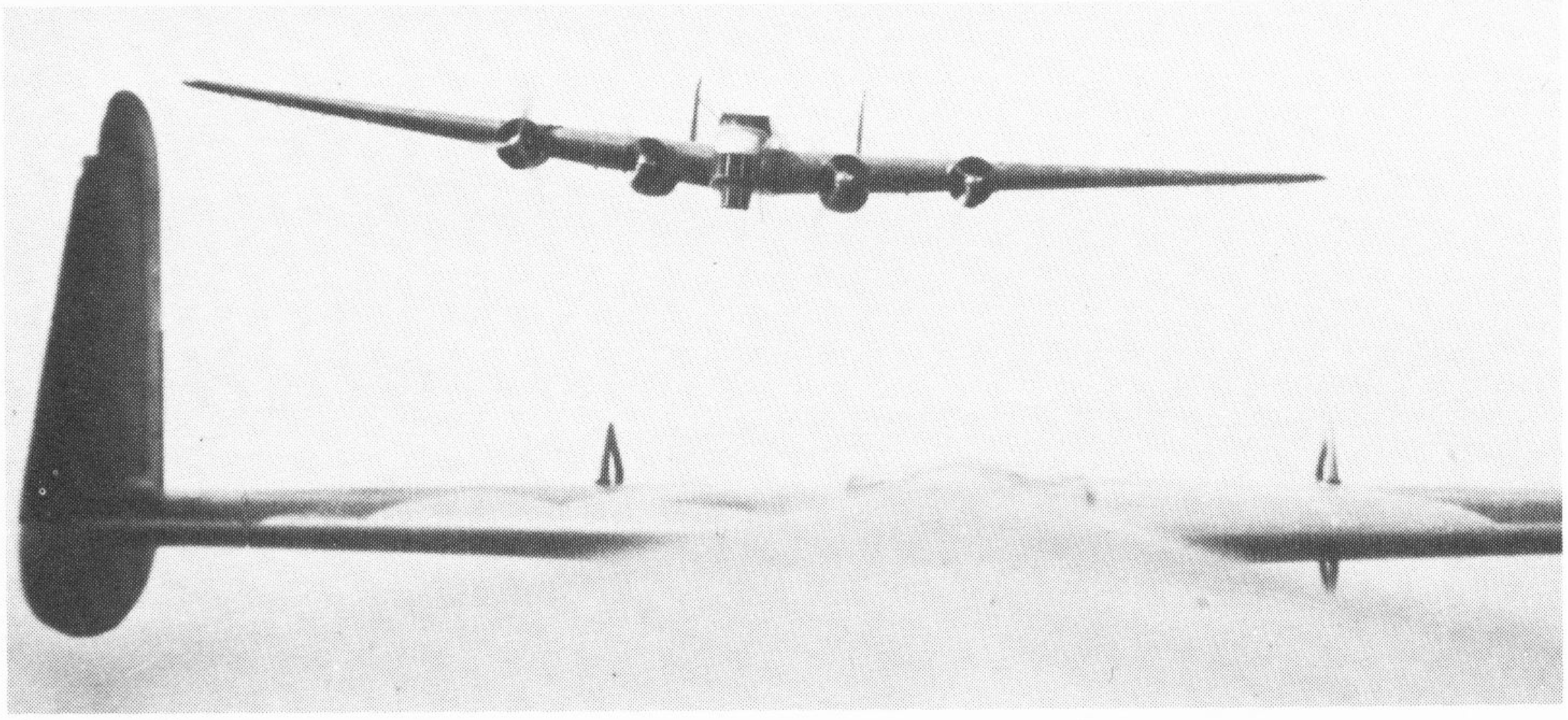

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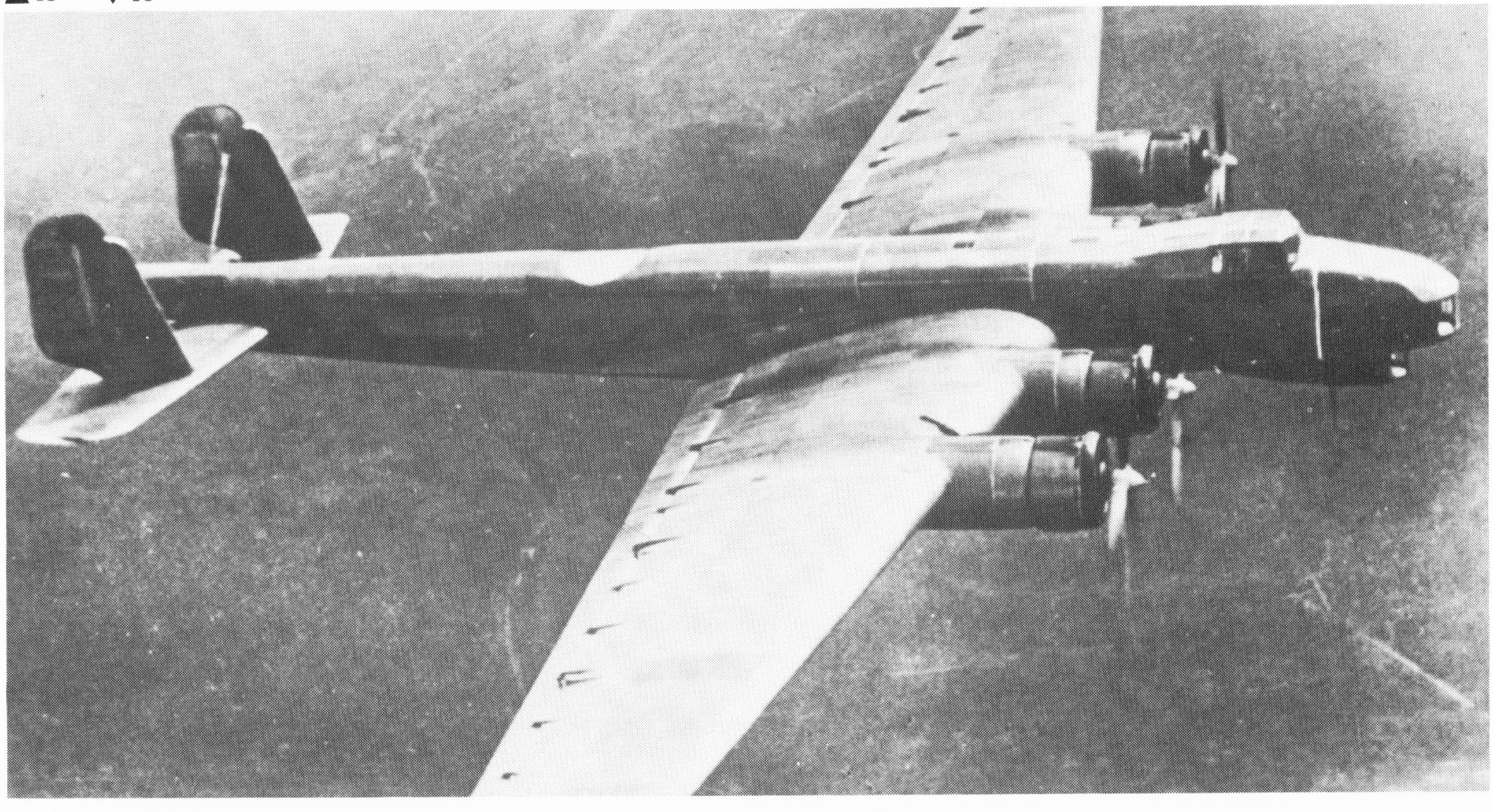


44. The Do 19 V1 was test-flown by *Flugkäpitan* Egon Farth on a number of occasions and proved to have very satisfactory flying characteristics. In August 1936, however, the RLM indicated to Dornier that the *Luftwaffe* had no further interest in four-engined strategic bombers and would achieve all its objectives with the smaller medium bombers.

45. Professor Claude Dornier tried to negotiate a contract with Deutsche Lufthansa for converting the Do 19 V1, and two bombers under construction, into civil transports but met with no success. Meanwhile, after a total of 83 flights conducted by Dornier and by the *Erprobungsstelle* at Rechlin (amounting to only 32 flight-hours), the RLM cancelled the entire programme and the Do 19 V1 was taken into *'Reichseigentum'* as the property of the Reich.

46. The Do 19 V1 was handed back to Dornier a short time later. Professor Dornier tried again to get the machine accepted as a long-range transport aircraft; meanwhile both the remaining Do 19s were scrapped by the company.

Do 17 AND Do 217 PRODUCTION

	1936	1937	1938	1939	1940	1941	1942	1943
January	–	30	33	69	44	3	16	77
February	–	28	45	76	40	15	8	89
March	–	34	36	46	23	31	83	81
April	–	39	20	65	43	23	72	80
May	2	26	11	80	41	13	85	87
June	1	26	16	72	34	16	82	78
July	3	25	53	89	18	37	76	84
August	5	30	87	72	10	33	66	69
September	16	36	73	72	15	35	64	55
October	10	38	38	67	7	35	71	–
November	8	45	49	48	–/1	16	39	–
December	25	49	41	40/1	–/5	22	59	–
Total:	**67**	**406**	**502**	**796/1**	**265/6**	**279**	**721**	**624**

Total (Do 17): 2,036 (including 12 night fighters), to October 1940

Total (Do 217): 1,631 (including 364 night fighters), to September 1943

3,667 (plus about 200 Do 217s assembled from spares, to September 1944)

TECHNICAL DATA FOR Do 17, 215, 217, 317 and 417

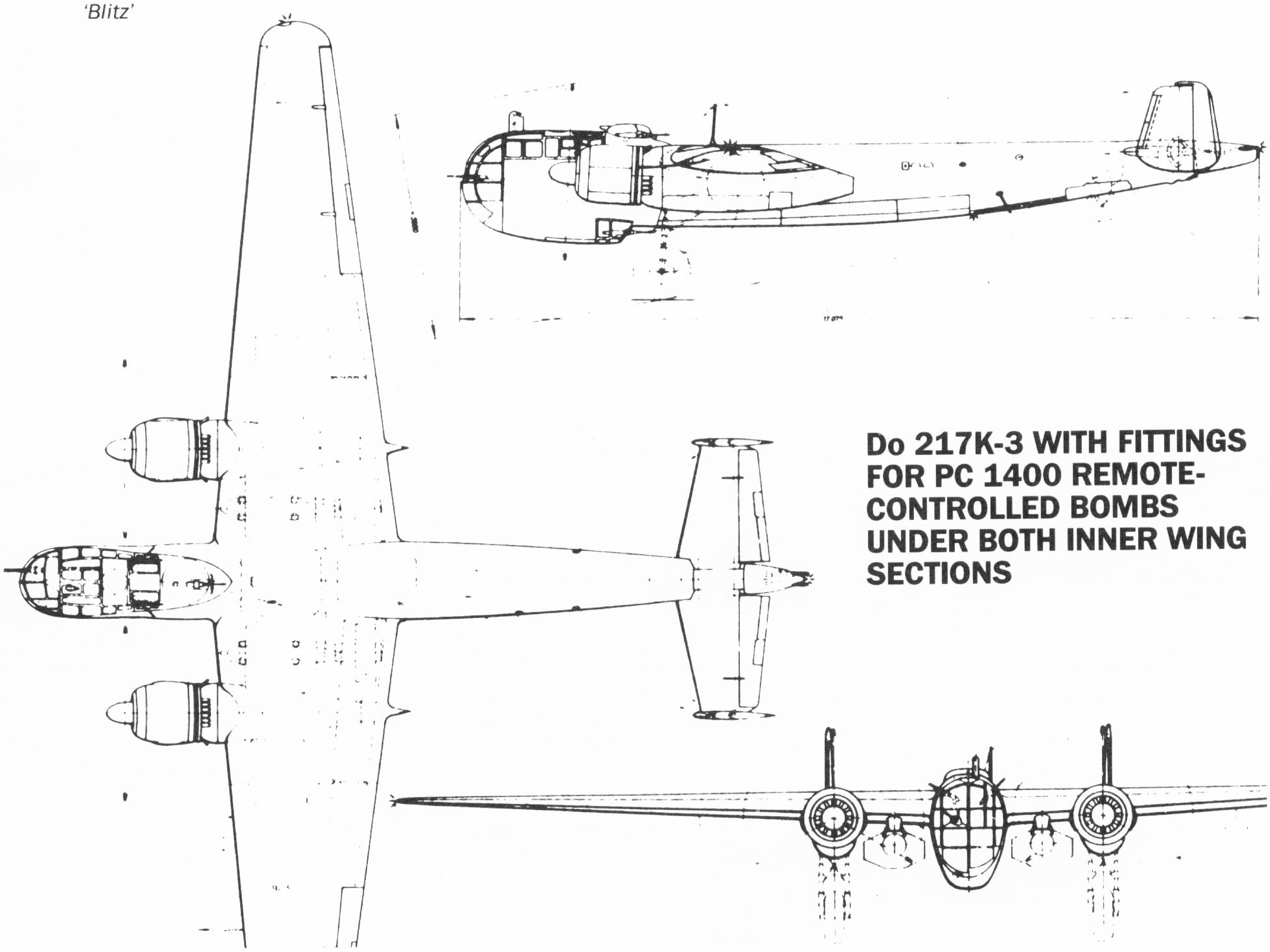
Version	Type	Powerplant	Wing area (m^2)	Take-off weight (kg)	Performance (kph)/at (m)	Maximum ceiling (m)
Do 17 V1	Experimental	BMW VI	55	6,500	435/4,000	5,000
Do 17 E-1	Fast bomber	BMW VID	55	7,000	325/3,000	5,500
Do 17 F-1	Reconnaissance	BMW VID	55	6,800	335/3,000	5,500
Do 17 Ka	Export version	Gnome/Rhône 14K	55	7,500	345/3,500	6,500
Do 17 M-1	Fast bomber	Bramo 323A	55	8,000	415/4,700	6,700
Do 17 P-1	Reconnaissance	BMW 132N	55	7,700	410/4,000	6,500
Do 17 U	Pathfinder	Bramo 323A	55	8,500	420/4,700	7,300
Do 17 R	Special reconnaissance	DB 601A	55	8,000	530/5,200	9,100
Do 17 S	Special reconnaissance	DB 601A	55	8,600	510/5,000	8,200
Do 17 Z-2	Medium bomber	Bramo 323A	55	8,800	430/4,700	7,300
Do 215 B-4	Reconnaissance	DB 601A	55	9,000	500/4,800	8,900
Do 217 A-0	Reconnaissance	Jumo 211A	57	10,000	480/5,700	7,600
Do 217 C-0	Medium bomber	Jumo 211B	57	10,900	470/5,700	7,600
Do 217 E-4	Medium bomber	BMW 801A	57	15,200	520/5,000	8,400
Do 217 G	Medium floatplane	BMW 801A	53	14,900	430/5,000	6,800
Do 217 H	Medium bomber	DB 603A	57	15,000	560/6,000	10,200
Do 217 K-1	Medium bomber	BMW 801ML	57	16,100	500/5,000	8,000
Do 217 K-2	RC bomb carrier	BMW 801ML	67	16,800	520/5,200	8,100
Do 217 L	High-altitude reconnaissance	DB 603'H'	70	13,400	580/6,000	14,200
Do 217 M-1	Medium bomber	DB 603A	57	16,700	530/6,500	10,000
Do 217 M-2	Torpedo bomber	DB 603A	57	16,700	500/6,000	9,600
Do 217 M-3	Medium bomber	DB 603A	59	16,000	535/6,000	9,600
Do 217 M-11	RC bomb carrier	DB 603A	67	16,500	530/6,000	9,600
Do 217 P-1	High altitude combat	DB 603/605	67	17,500	610/6,000	15,300
Do 217 R-1	Heavy dive-bomber	DB 603A	62	17,800	560/6,500	10,500
Do 317 A	Medium combat	DB 603A	68	18,200	560/6,000	9,800
Do 317 B	Medium combat	DB 610A	68	20,100	580/6,000	10,500
Do 417 V1	Medium combat	DB 603G	62	17,300	600/8,000	9,500

TECHNICAL DATA FOR Do 11, 13 and 23

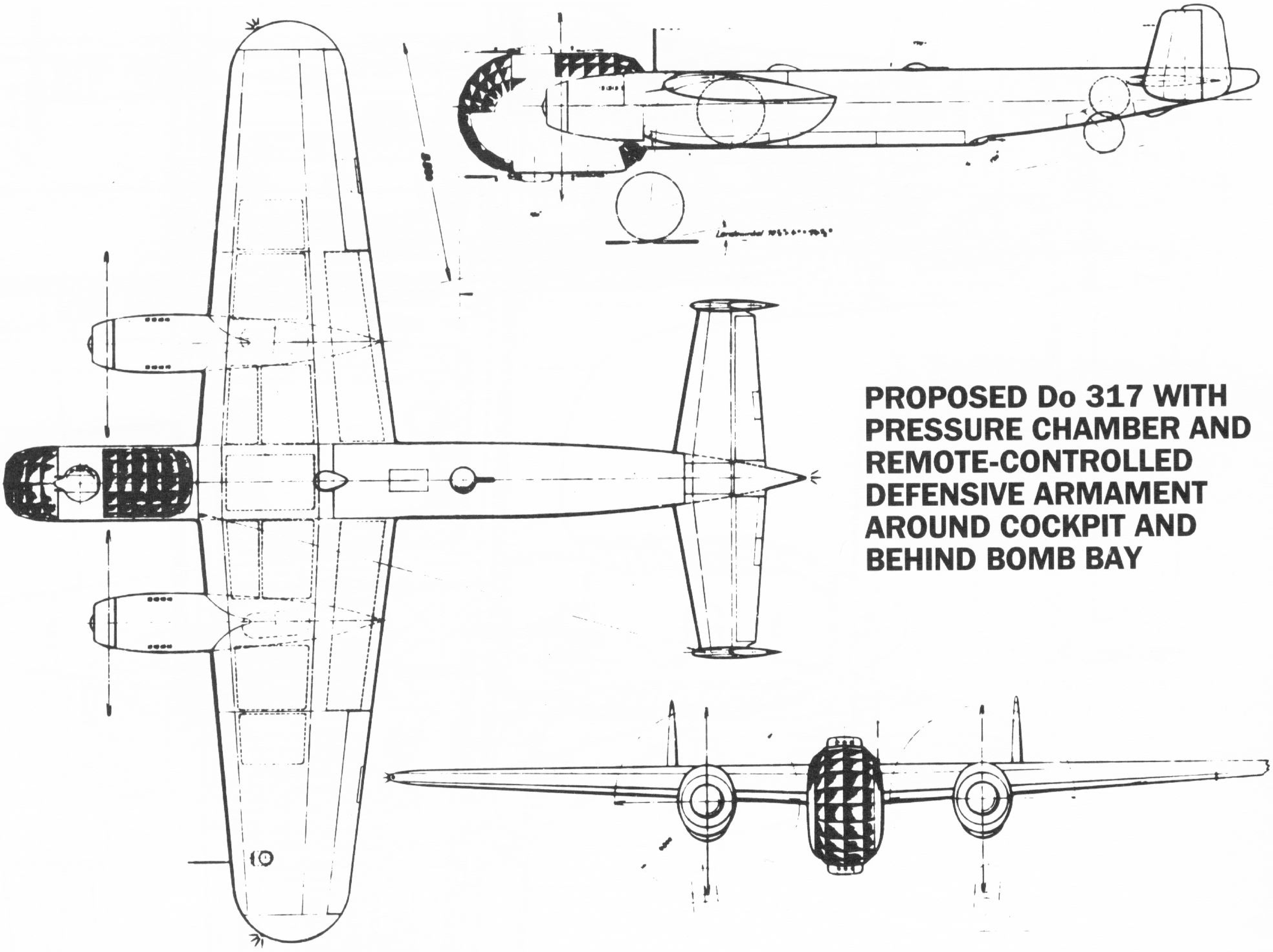
Do 11A	Bomber	2 × Siemens 530hp Jupiter VI
Do 11C	Bomber	2 × Siemens 650hp Sh 22B-2
Do 11Da	Bomber	2 × Siemens 650hp Sh 22B-2
Do 11Db	Transport	2 × Siemens 650hp Sh 22B-2
Do 13A	Bomber	2 × Siemens 530hp Jupiter VI
Do 13C	Bomber	2 × BMW VI 750hp; new wings
Do 13D	Bomber	2 × BMW VI 750hp
Do 13E	Bomber	2 × Curtiss Conqueror; experimental
Do 17F	Bomber	2 × BMW VI 750hp
Do 23E	Bomber	2 × Curtiss Conqueror; experimental
Do 23F	Bomber	2 × BMW VI 750hp; metal wings
Do 23G	Bomber	2 × BMW VI 750hp; improved Do 23E

Do 17 215 AND 217 UNITS

A1+	*Kampfgeschwader 53 'Legion Condor'*	Do 17Z
A3+	*Kampfgeschwader KG 200*	Do 217E
F1+	*Kampfgeschwader KG 76*	Do 17Z
F6+	*Fernaufklärungsgruppe 122*	Do 17P, F and M
F8+	*Kampfgeschwader KG 40*	Do 217E and K
G2+	*Fernaufklärungsgruppe 124*	Do 17F
K7+	*Aufklärungsgruppe Nacht*	Do 17P, F; Do 217E, K and M
L2+	*Lehrgeschwader LG 2*	Do 17F; Do 215B
P2+	*Aufklärungsgruppe 21*	Do 17M
T1+	*Aufklärungsgruppe 10 'Tannenberg'*	Do 17F and P
T9+	*Aufklärungsgruppe ObdL*	Do 215
U5+	*Kampfgeschwader KG 2 'Holzhammer'*	Do 17Z; Do 217C, E, K and M
Z6+	*Kampfgeschwader KG 66*	Do 217E and K
3E+	*Kampfgeschwader KG 6*	Do 217E and K
4N+	*Aufklärungsgruppe 22*	Do 17P, F and M
4U+	*Fernaufklärungsgruppe 123*	Do 17F
5D+	*Aufklärungsgruppe 31*	Do 17P and M
5F+	*Aufklärungsgruppe 14*	Do 17P and M
5K+	*Kampfgeschwader KG 3 'Blitz'*	Do 17Z
5T+	*Kampfschulgeschwader 101*	Do 17Z; Do 217E and K
6K+	*Aufklärungsgruppe 41*	Do 17P
6N+	*Kampfgeschwader KG 100 'Wiking'*	Do 217C, E, K and M
7A+	*Fernafklärungsgruppe 121*	Do 17P, F and M
7T+	*Küstenfliegergruppe 606*	Do 17Z
+	*Aufklärungsgruppe 11*	Do 17P and M
+	*Aufklärungsstaffel des Generals der Luftwaffe beim Ob. des Heeres*	Do 17F
+	*Aufklärungsstaffel der 1 Armee*	Do 17P
+	*Aufklärungsstaffel des I Flakkorps*	Do 17M
+	*Aufklärungsstaffel des II Flakkorps*	Do 17M
+	*Aufklärungskette (F) des AOK 20*	Do 17P
+	*Luftlandegeschwader 1*	Do 17M
+	*Wettererkundungsstaffel 26*	Do 17Z
+	*Wettererkundungsstaffel 51*	Do 17Z



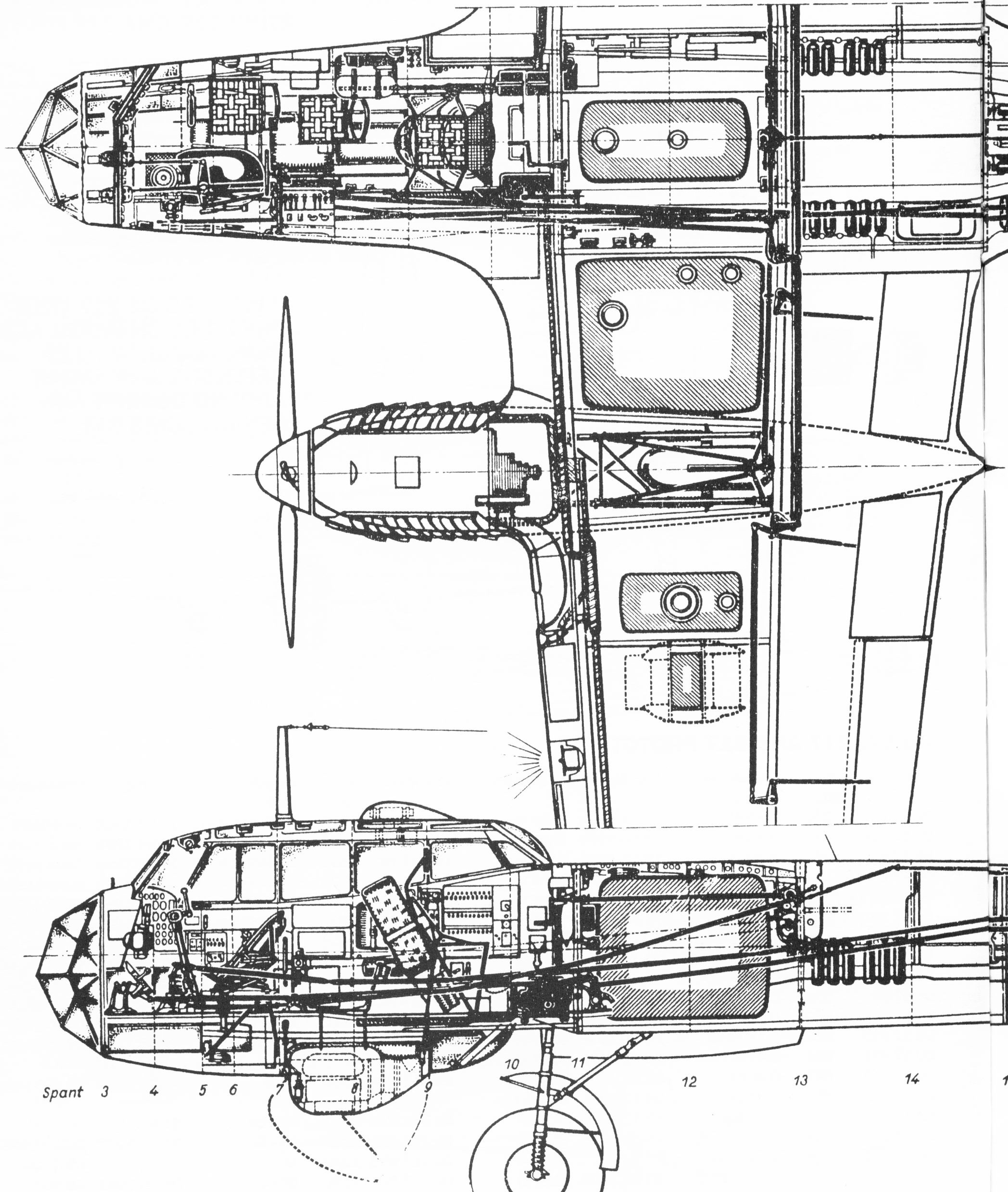
Do 217K-3 WITH FITTINGS FOR PC 1400 REMOTE-CONTROLLED BOMBS UNDER BOTH INNER WING SECTIONS



PROPOSED Do 317 WITH PRESSURE CHAMBER AND REMOTE-CONTROLLED DEFENSIVE ARMAMENT AROUND COCKPIT AND BEHIND BOMB BAY

Do 17, 217 AND 317 PROTOTYPES

Prototype	*Prod. no.*	*Registration/ code*	*First flight*	*Powerplant*
Do 17 V1	256	D-AJUN	23.11.1934	BMW VI
Do 17 V1E	686	D-AJUN	13.06.1936	BMW VI
Do 17 V2	257	D-AHAK	18.05.1935	BMW VI
Do 17 V3	258	D-ABIH	19.09.1935	BMW VI
Do 17 V4	654	D-AGYA	24.03.1936	BMW VI
Do 17 V5	655	D-AKOH	?	Hispano-Suiza 12
Do 17 V6	656	D-AKUZ/GL+AJ	12.10.1936	BMW VI
Do 17 V7	657	D-AQYK/KD+NE	10.12.1936	BMW VI
Do 17 V8	658	D-AXOM	10.09.1936	BMW VI
Do 17 V9	659	D-ABOY/BC+DT	27.08.1936	BMW VI
Do 17 V10	660	D-AKUU/RB+DK	21.10.1936	BMW VI
Do 17 V11	681	D-ATYA	11.02.1937	BMW VI
Do 17 V12	682	D-AKTU	08.01.1937	DB 600C
Do 17 V13	683	D-ATAH	24.10.1936	DB 600C
Do 17 V14	684	D-AFOU	15.12.1936	BMW VI
Do 17 V15	816	?	15.09.1936	BMW VI
Do 17 V16	839	?	?	BMW VI
Do 17 V17	801	?	30.05.1936	BMW VI
Do 17 MV1	691	D-AELE/GL+AL	01.04.1937	DB 601A
Do 217 V1	687	?	04.10.1938	DB 601A
Do 217 V1E	694	?	29.11.1939	BMW 801A
Do 217 V2	688	D-ABWC/CN+HJ	12.04.1939	DB 601A/E
Do 217 V3	689	D-ACDE/CN+HK	13.04.1939	Jumo 211A
Do 217 V4	690	D-AMSD/CN+HL	14.06.1939	Jumo 211B
Do 217 V5	2703	D-ADBD/GM+AF	23.06.1939	Jumo 211B
Do 217 V6	2704	D-ADBE/CO+JJ	15.10.1939	DB 601A/R
Do 217 V7	2707	D-ACBF/CO+JK	15.11.1939	BMW 139
Do 217 V8	2708	D-AHJE/CO+JM	23.03.1940	BMW 801A/D
Do 217 V9	2709	CO+JM	19.07.1940	BMW 801A/D
Do 217 V10	2719	CO+JN	30.09.1940	BMW 801A/B
Do 217 V11	2720	CO+JO	24.03.1941	BMW 801A
Do 217 V12	1012	DD+LL	15.11.1940	BMW 801A
Do 217 V13	0032	DB+BC	29.06.1943	DB 603 with TK 9
Do 217 V14	0030	None	–	DB 603 with TK 11
Do 217 HV1	0021	RO+OA	15.07.1941	DB 603A
Do 217 KV1	1125	RH+EI	31.03.1942	BMW 801ML
Do 217 MV1	1230	BK+IS	?	DB 601A
Do 217 PV1	1129	BK+IP	06.06.1942	DB 603/ DB 605
Do 217 RV1	0029	TC+ZC	06.08.1942	BMW 801ML
Do 317 V1	?	VK+IY	08.09.1943	DB 603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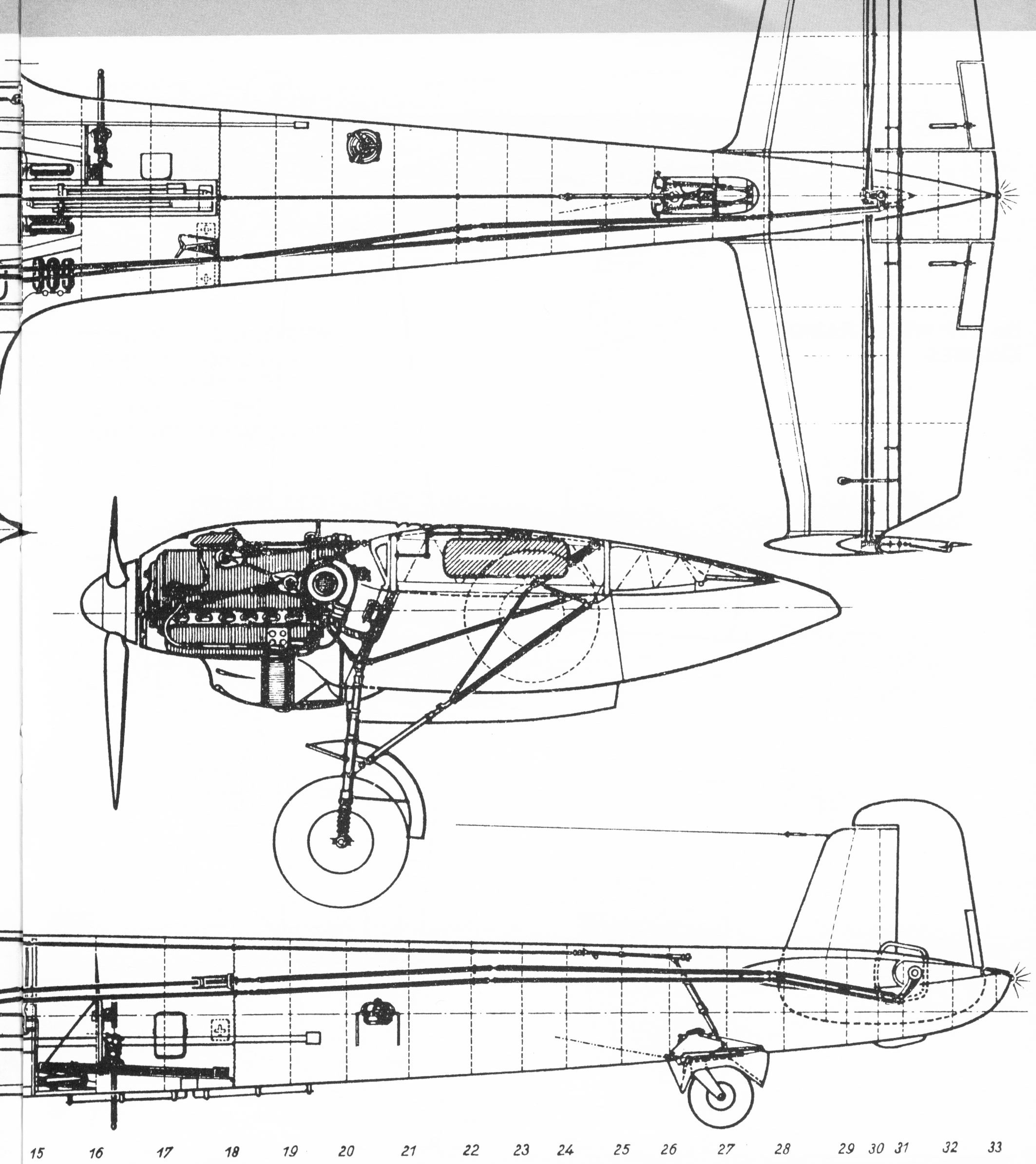
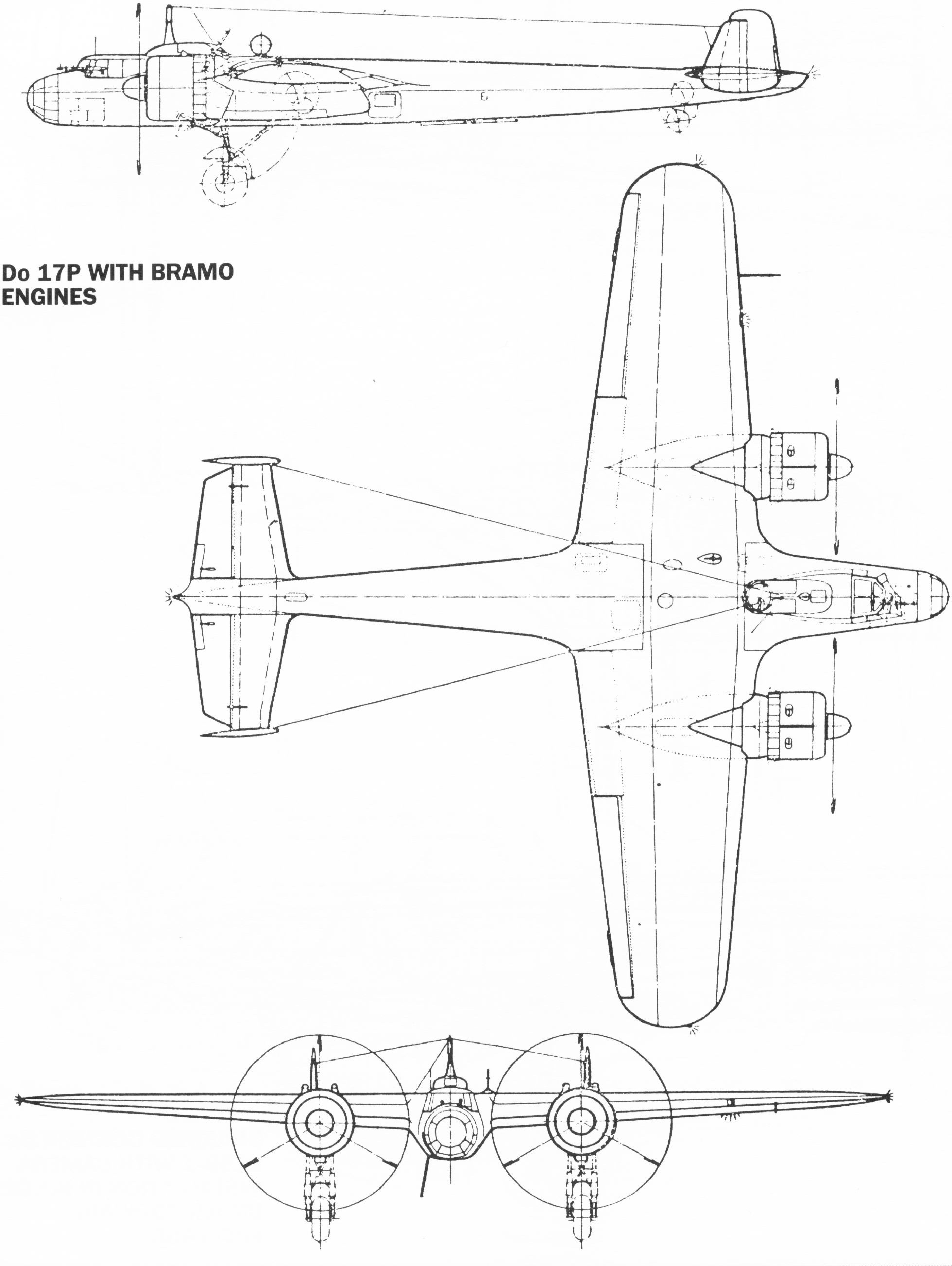
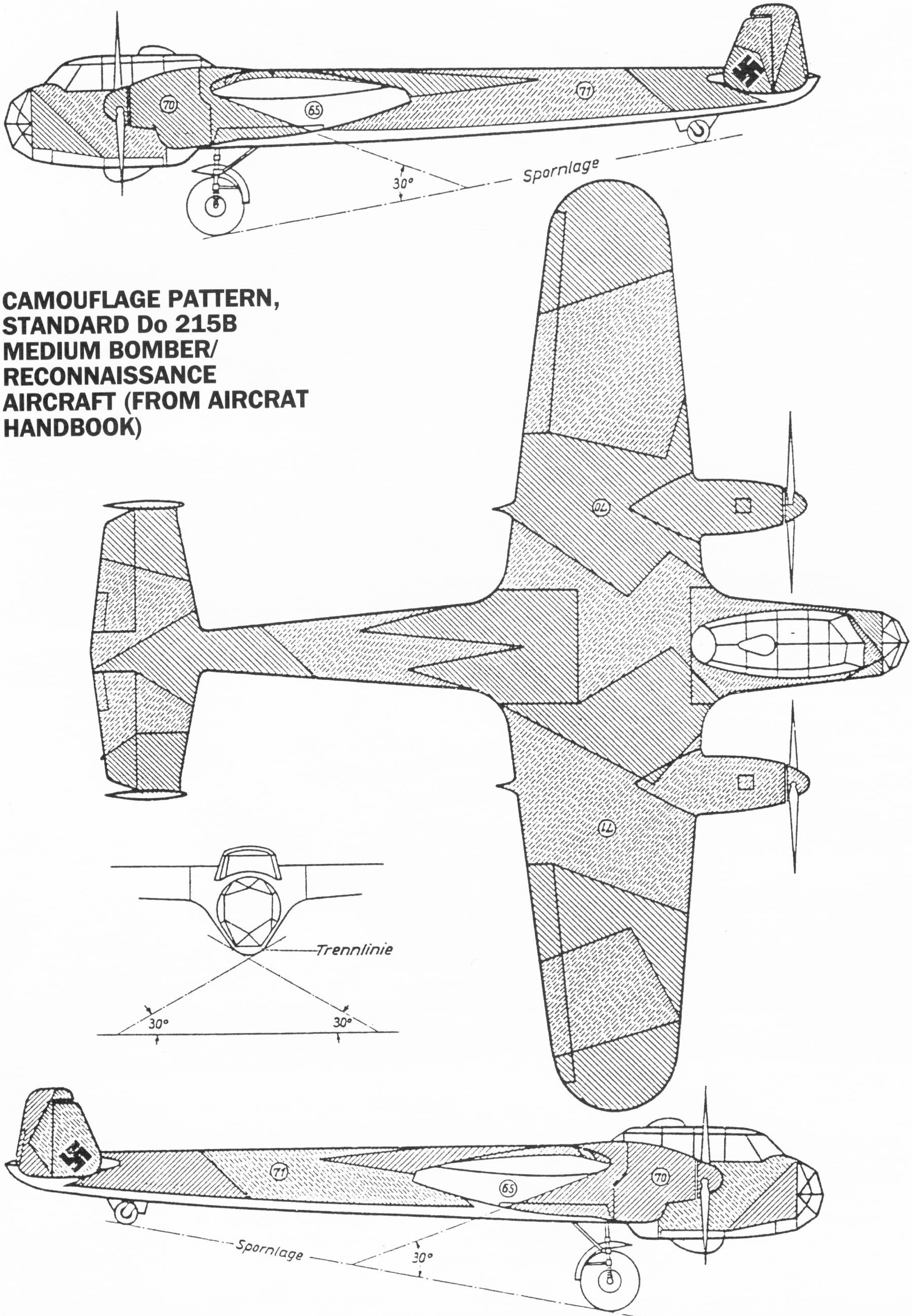


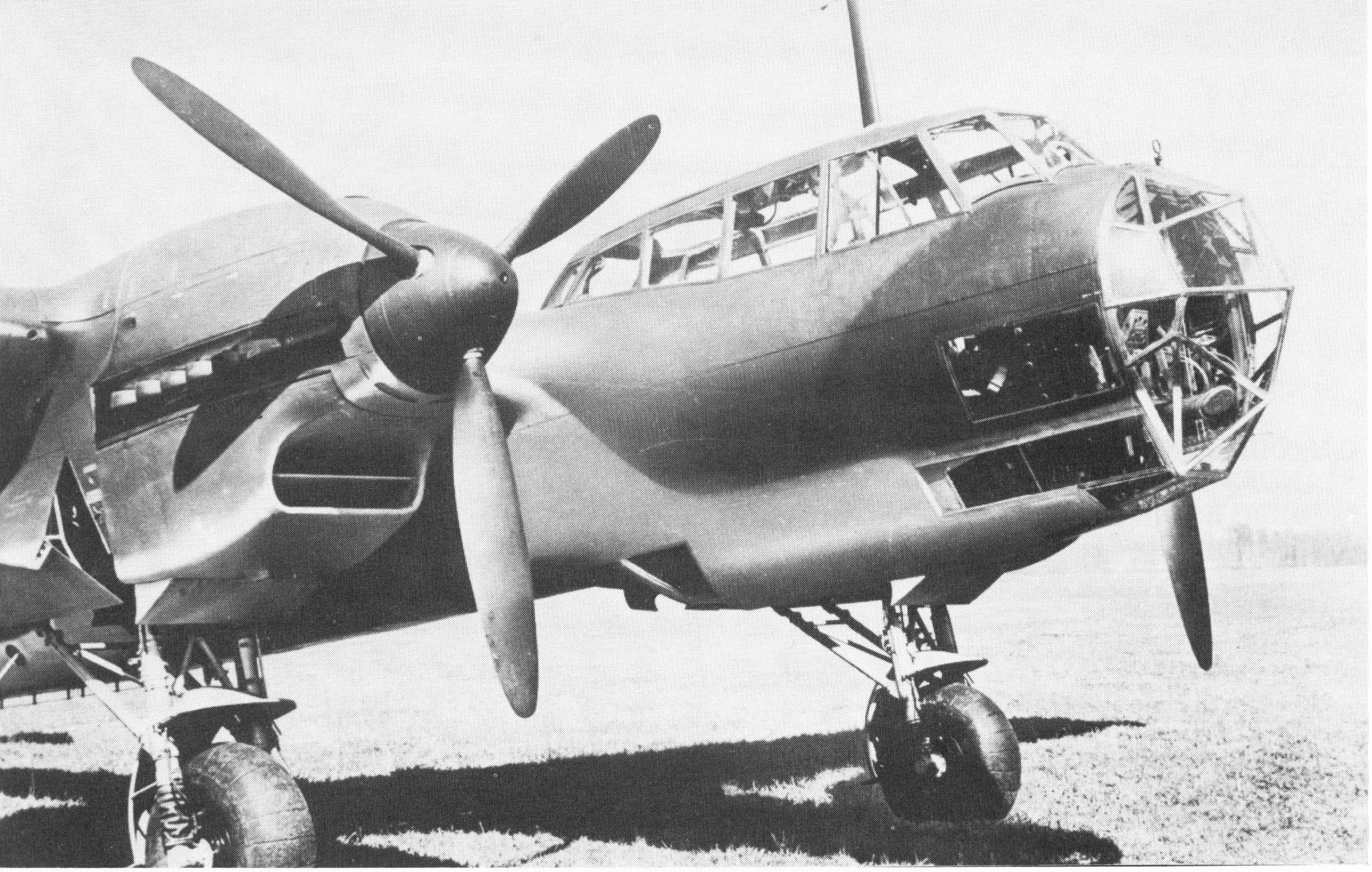
UNARMED DORNIER Do 215B-1 WITH CAMERA INSTALLATION IN BULGE UNDER FORWARD FUSELAGE

Do 17P WITH BRAMO ENGINES





CAMOUFLAGE PATTERN, STANDARD Do 215B MEDIUM BOMBER/ RECONNAISSANCE AIRCRAFT (FROM AIRCRAT HANDBOOK)



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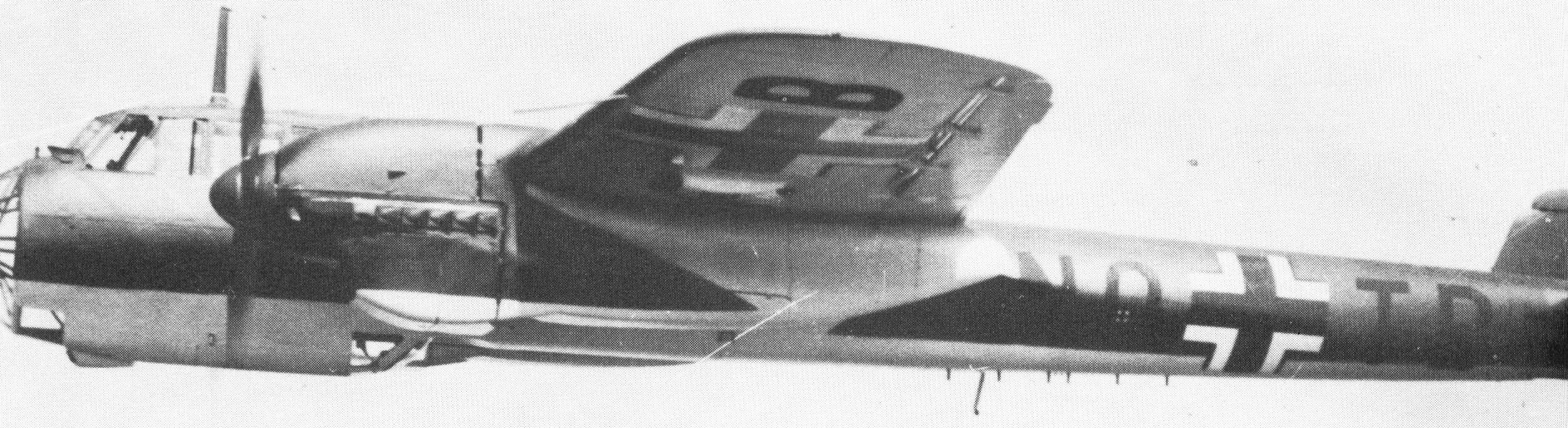

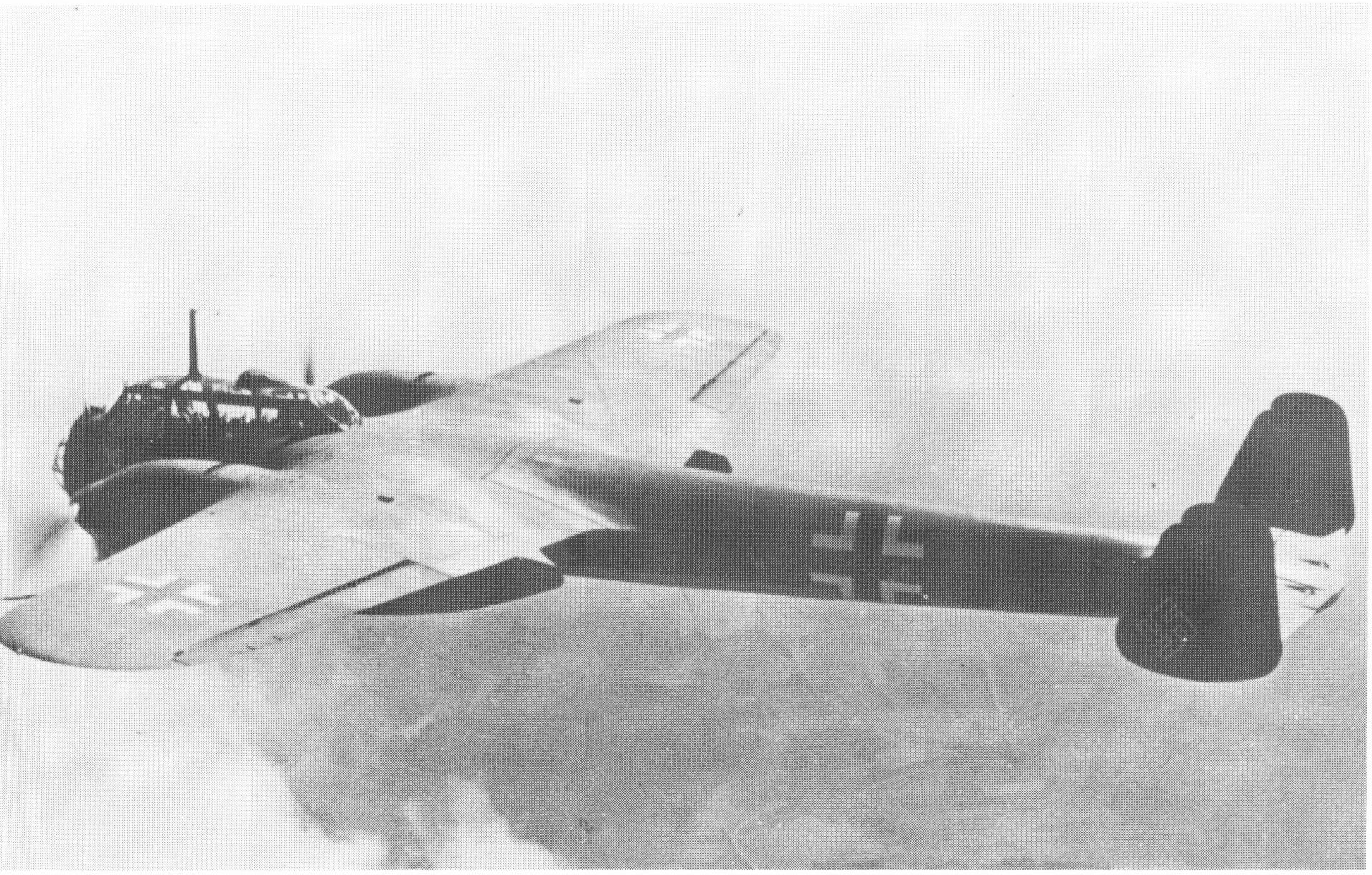

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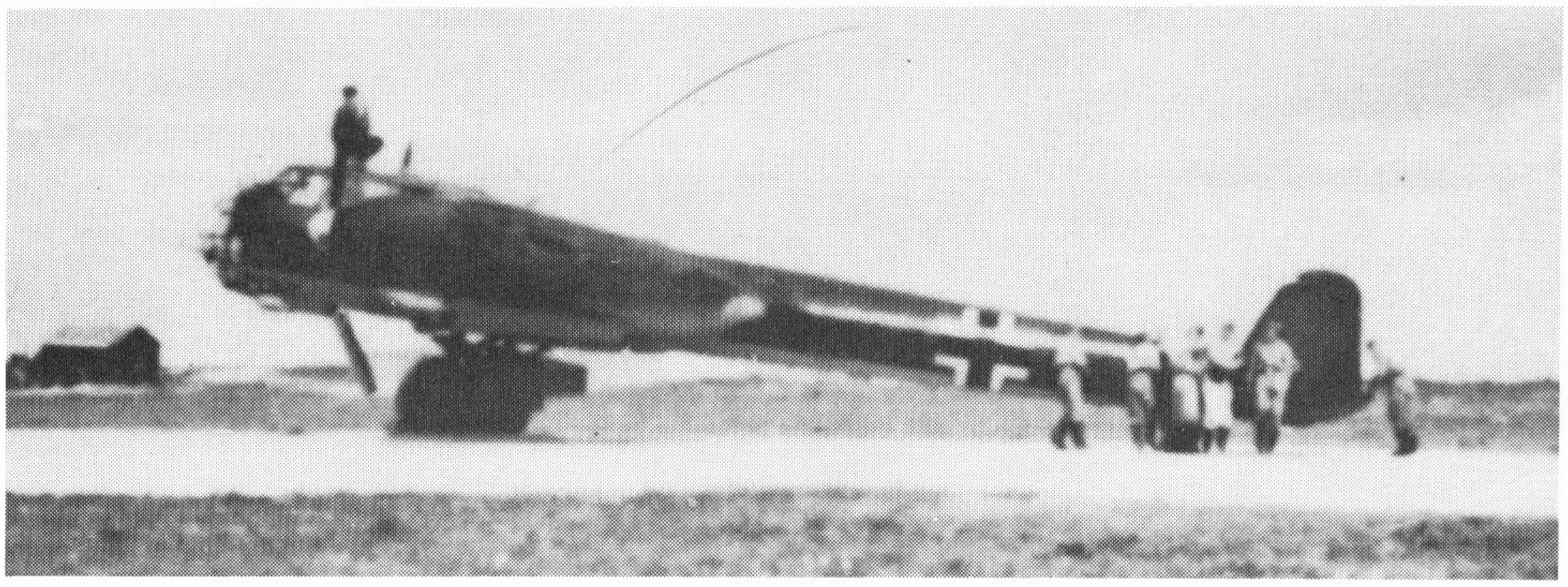
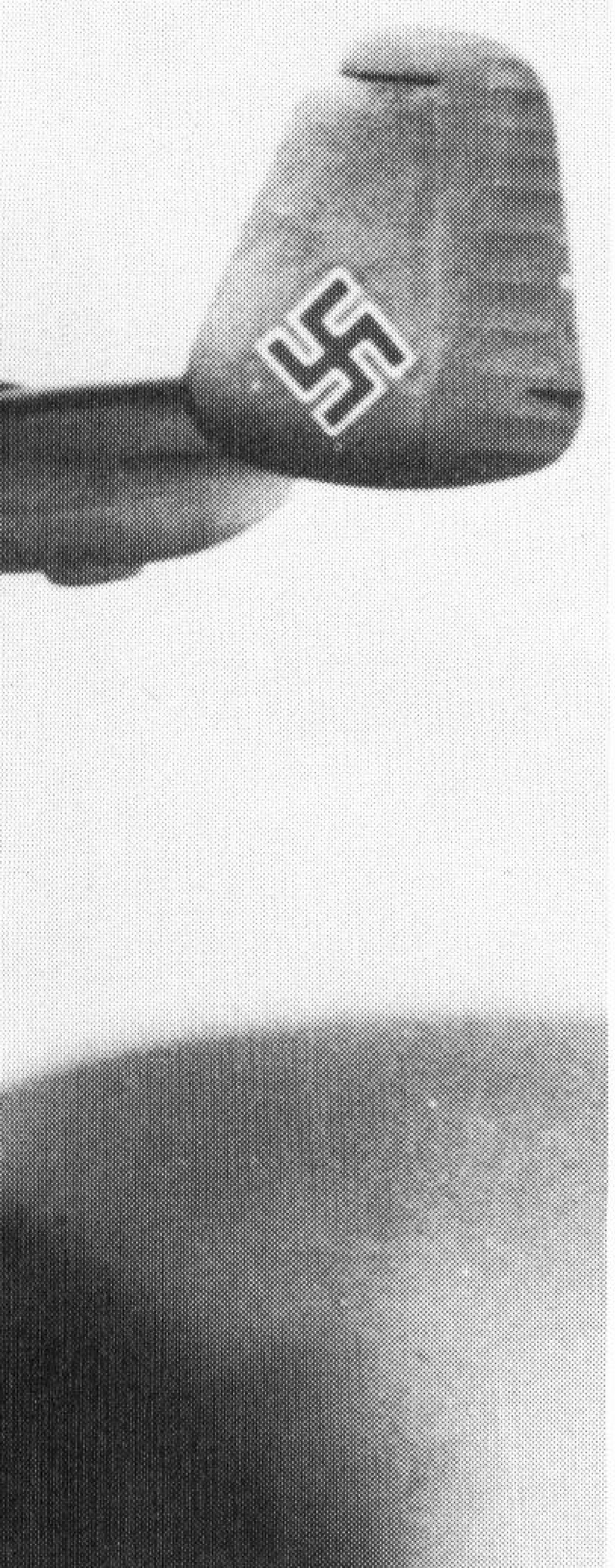


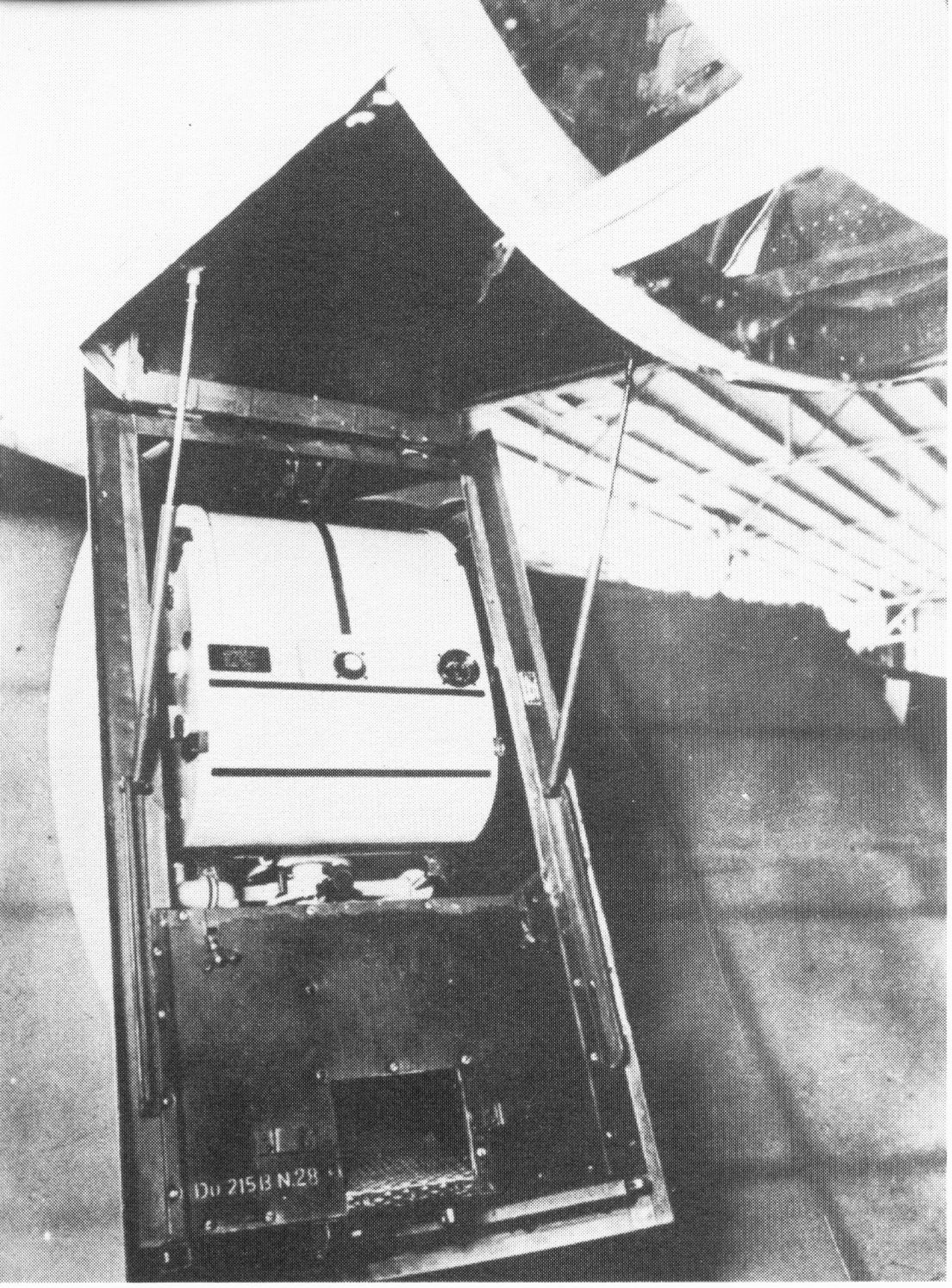


47. The D 215 V1 was modified from one of the small number of Do 17Z-0 pre-series aircraft, the Bramo engines being replaced by more powerful DB 601s. Three prototypes were built, the second (D-AFFY) being later re-engined with a pair of Gnome-Rhône 14Ns. Few Do 215A-1s were produced, and plans to sell 240 Do 215s to Sweden and Yugoslavia were cancelled by the RLM.

48. In August 1939 the Dornier company began work on a production batch of 101 Do 215s. The first three B-0s (*WerkNr* 0001–0003) were completed in December 1939 and were followed by three others early the next year. The first Do 215B-1 (NO+TA, *WerkNr* 0007) appeared in February 1940. Some of these aircraft were transferred to the third *Aufklärungsstaffel* (reconnaissance squadron) of the *Luftwaffe* High Command.

49. After contracts with Hungary and the Soviet Union requiring the delivery of two Do 215B-3s, production of the long-range reconnaissance version began. The first such aircraft were, again, operated by 3/AufklSt ObdL, at Stavanger in Norway. In April 1940 thirteen Do 215Bs and three He 111Hs were stationed there, other 215Bs seeing service in Northern France.

50. On 10 May 1940 all three *Staffeln* of the *Aufklärungsgruppe ObdL* were fully equipped with the Do 215 and only two Bf 110s and seven He 111s were still on the *Gruppe*'s inventory. The unit lost two aircraft in action over the Netherlands and Belgium; meanwhile a second unit, 1(F)/124, was operating nine Do 215B-4s in May 1940 for various missions in the west.



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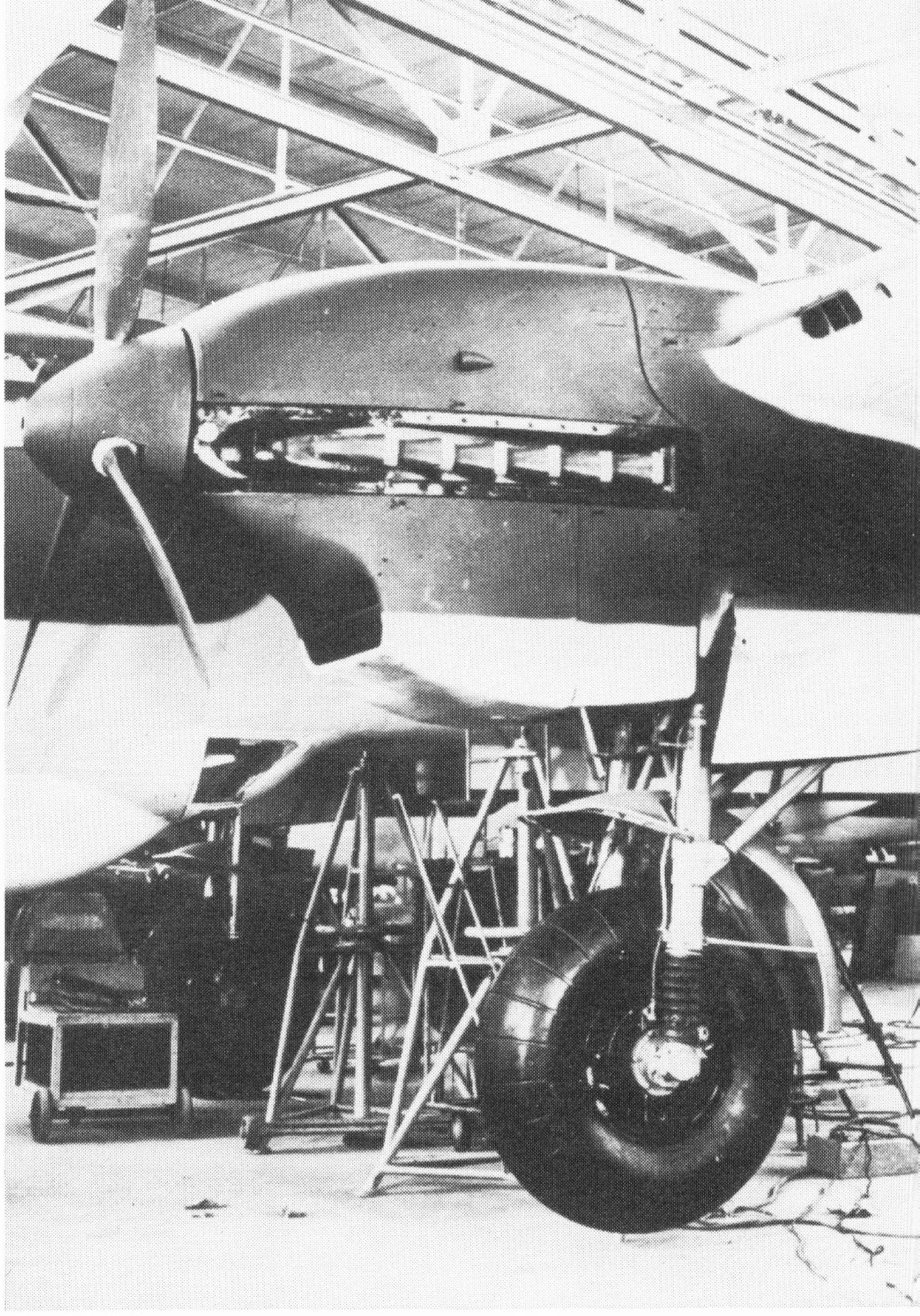

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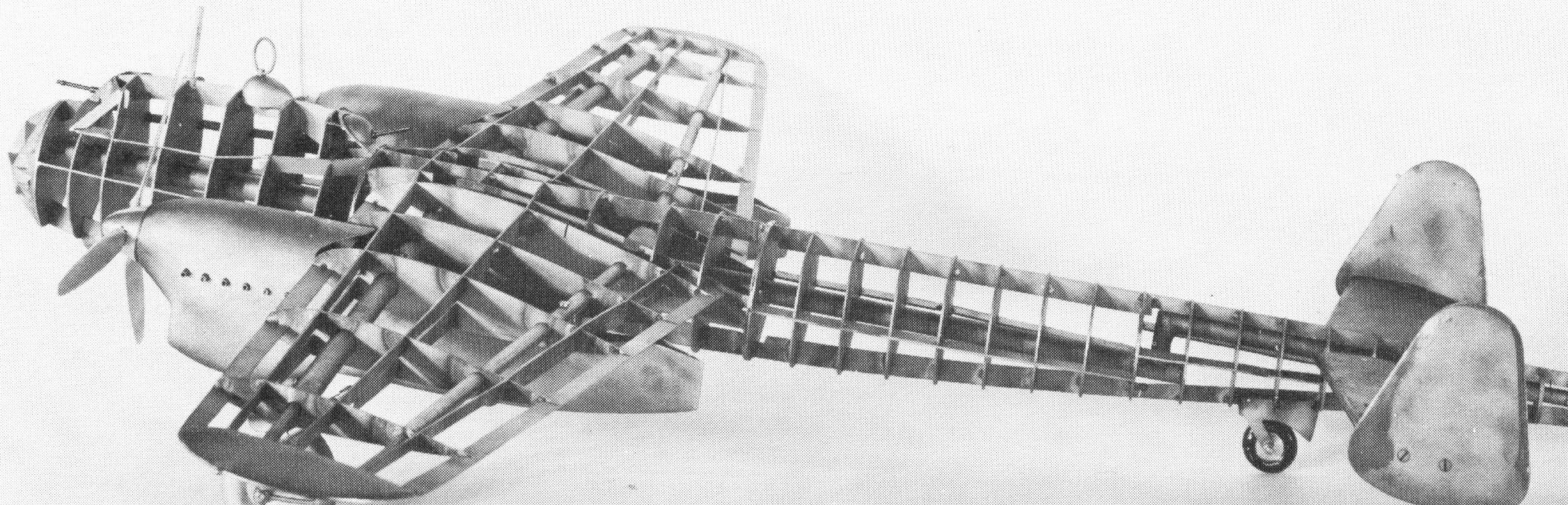

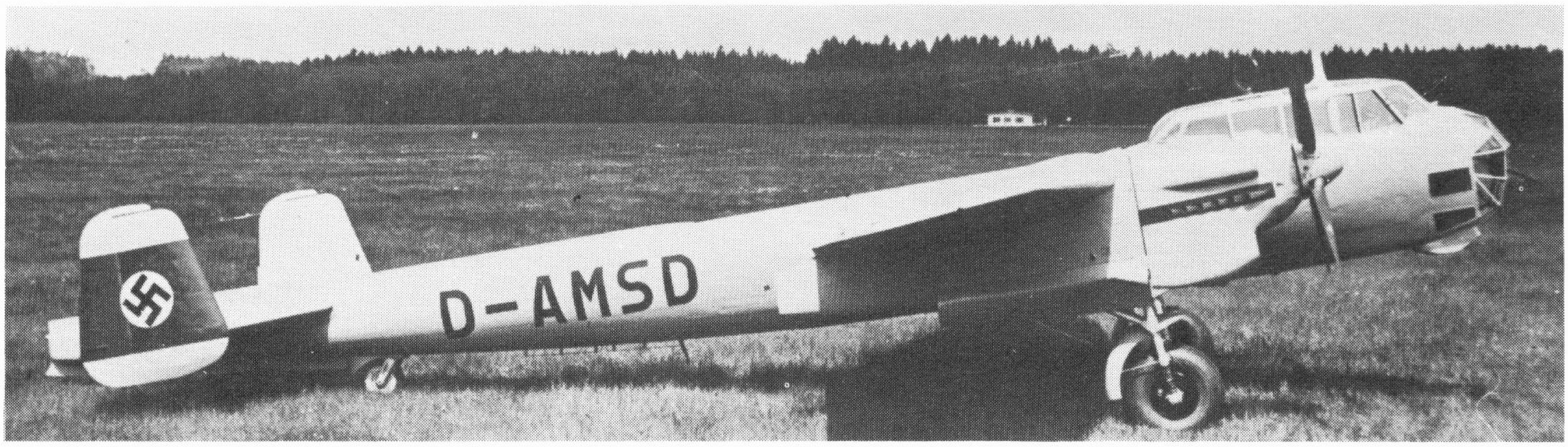

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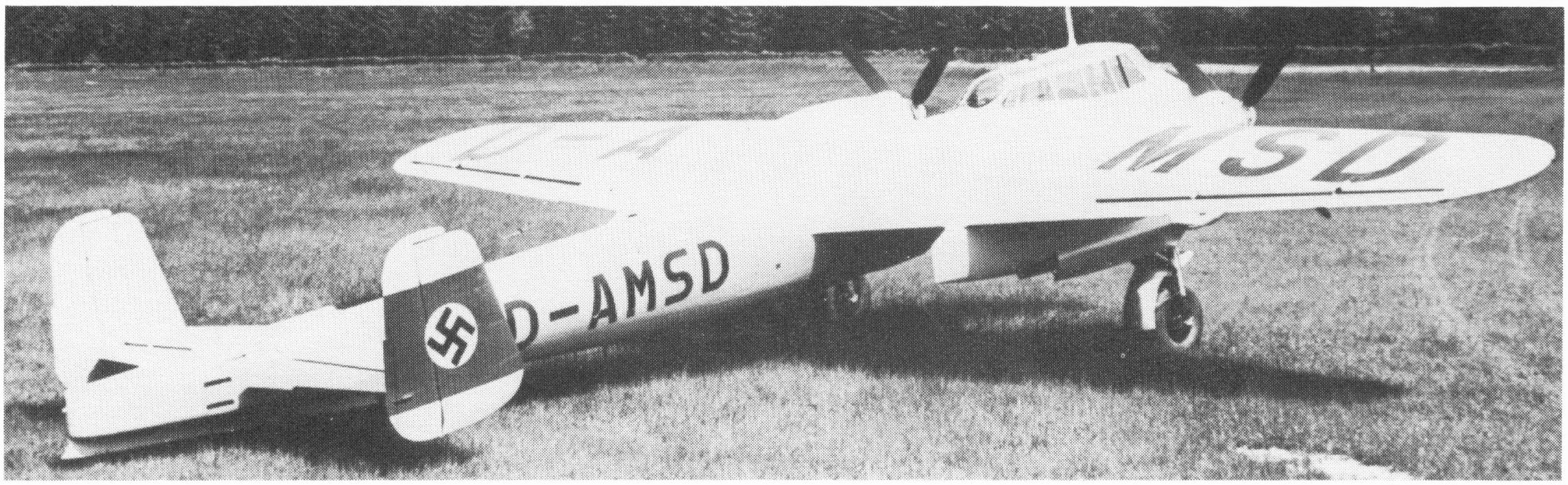

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51. The Do 215 also participated in the Battle of Britain, the *Aufklärungsgruppe ObdL* losing, during the first two days, three B-4s to British fighters and ground fire. In July 1940 three more aircraft were damaged during an air raid on Stavanger, and in August that year another B-4 was shot down by Hurricanes over the Channel; two B-5s, (DB+KH and DB+KK) were lost on 18 and 21 September. This close-up photograph shows the camera installation of the 38th production Do 215.

52. During 1940 a total of 92 DB 601-powered Do 215s, mainly B-4s, were completed. 1(F)/100 and the *Nachtaufklärungsgruppe* received a few B-4s in 1941, but in August 1942 most of the remaining Do 215Bs were transferred to allied air arms, having had some of their more sophisticated equipment removed by the *Versuchskommando für Höhenfluge* at Oranienburg near Berlin. One aircraft, a Do 215B-6, was retained by Dornier for supercharger trials, and others flew with the *B-Schulen* (training squadrons) until 1943.

53. This small-scale model of the Do 217C differed little from those built for all the other Dornier bombers. The engine nacelles were similar in shape to those employed for Jumo 211A/B engines installed later in the few remaining Do 217C-0s. The model has the old-style tailwheel, and the metal air brakes at the tip of the fuselage. The shape of the aircraft in general reflects a mixture of earlier Dornier designs, resulting in a more powerful machine than the Do 17Z or Do 215, although the defensive armament consists only of three small-calibre MG 15s.

54, 55. D-AMSD (later CH+HL) was the fourth Do 217 prototype, which made several test-flights at Löwenthal, Munich and Rechlin prior to the outbreak of war. The first flight of this aircraft is recorded as having taken place as early as June 1939; the Do 217 V1 had been flying since 4 October 1938 and the second was completed in summer 1939 (and scrapped in late 1942).

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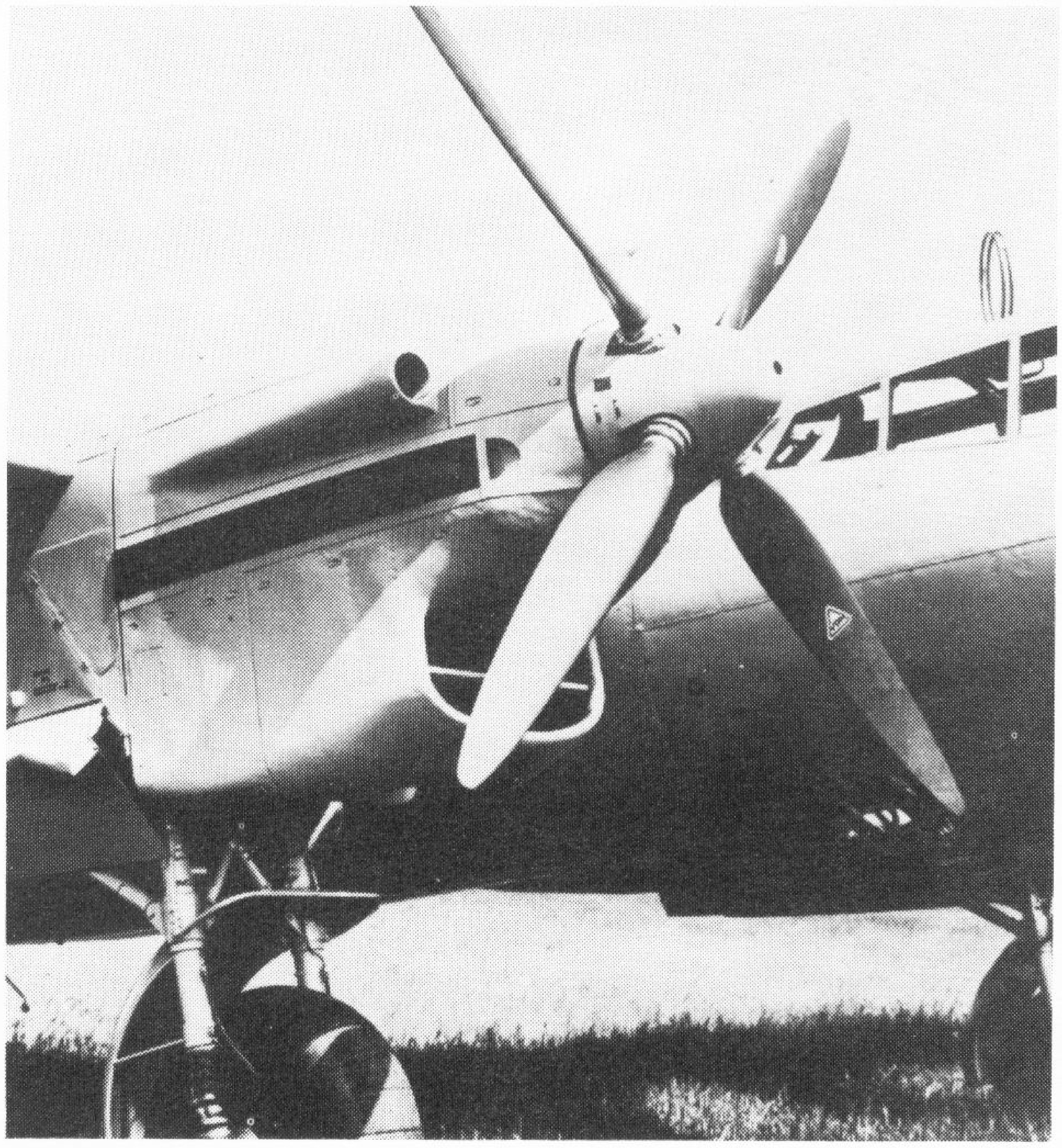
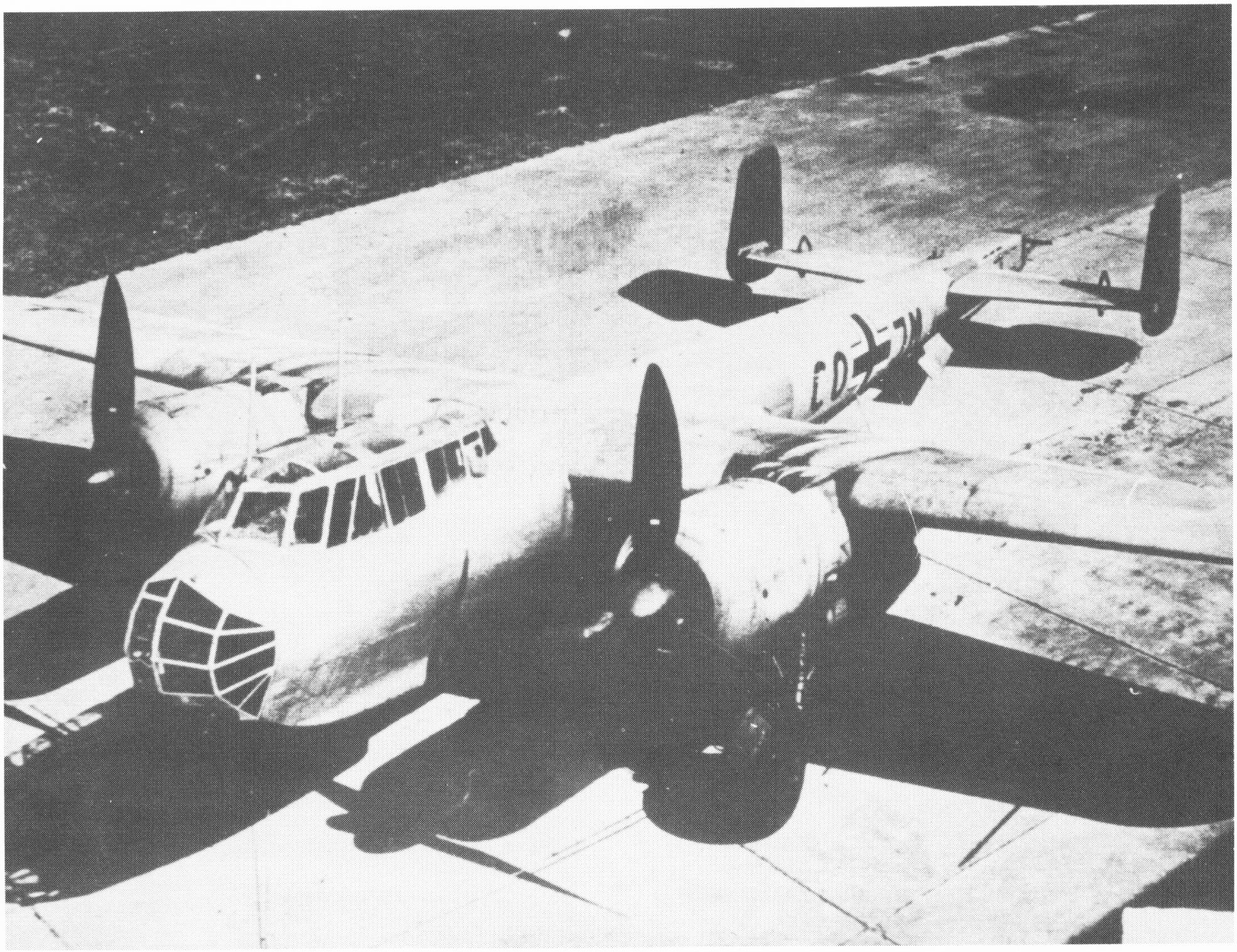


56. Like the Do 217 V3 (D-ACDE, later CH+HK, *WerkNr* 689), the fourth prototype 217 (shown) was equipped with Jumo 211s although, in contrast to the earlier aircraft, the more powerful 211B version of the engine was installed. The Do 217 V4 was employed in testing modified equipment and defensive armament for the production aircraft which followed.



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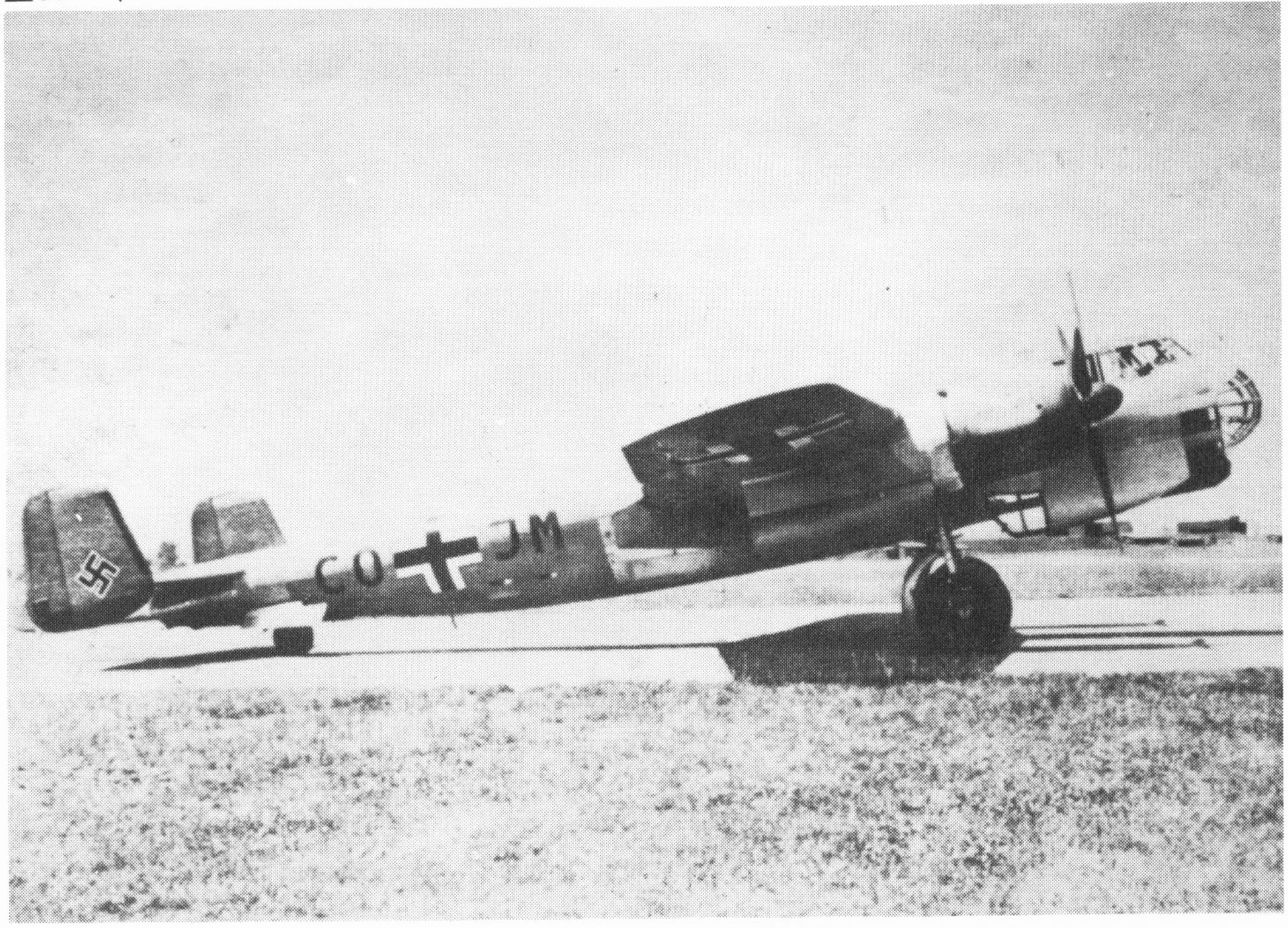
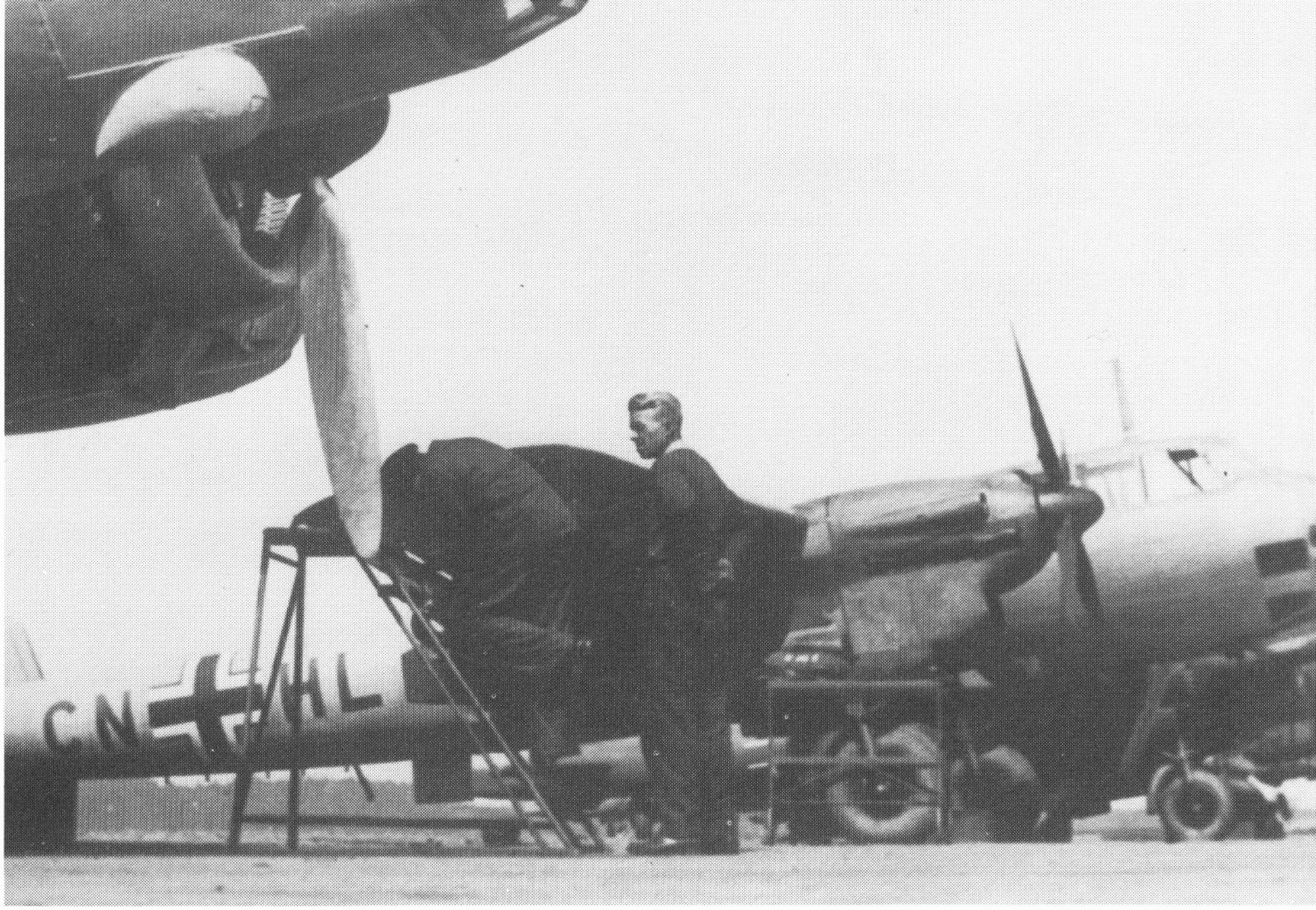


57, 58. The Do 217 V9 (CO+JM) was one of the prototypes for the E series; it had BMW 801A-1 engines and subsequently was re-fitted with 801D-1s. The aircraft bore the *Werknummer* 2709 and was armed with just three MG 15s. The early 217E differed from the later E-1 in having a larger ventral gun position and a smaller payload. The V9 spent a good deal of its time at Rechlin before being handed back to Dornier.

59. Three generations of Dornier bombers photographed at Löwenthal: to the left is a modified Do 17P-1; next to it is the Do 217 V4 (CH+HL), similar to Do 217C standard; and just visible in the background is the second prototype Do 217R (*WerkNr* 0030, DG+BA), which participated in an extensive programme of dive-bombing trials with a second R series aircraft. All the other Rs were scrapped before they were completed. The Do 217R V2 was flown with the central tail arrangement designed for some production Do 217 dive-bombers.



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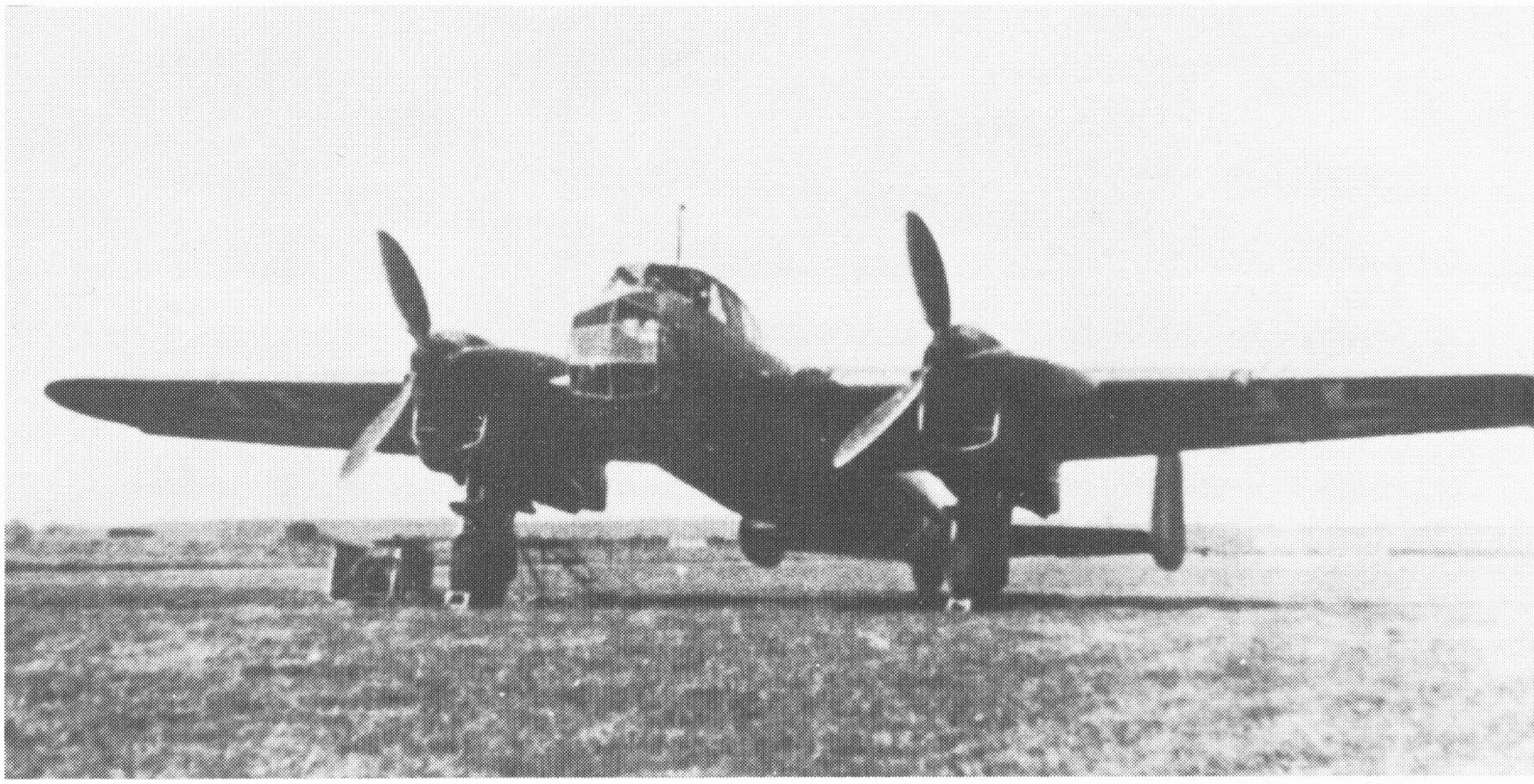
60. The first of more than 1,500 Do 217s – the Do 217A-0, of which just six examples were completed at Friedrichshafen. These aircraft, *WerkNr* 2701–2706, were flown for the first time in the spring and summer of 1940. Aircraft 2701 was tested at Rechlin; 2703 became the Do 217 V5; and it was decided to modify 2704 and 2705 into high-altitude reconnaissance aircraft with larger wings and new engines (for example, the DB 601F and R). In 1942 the latter were rebuilt as fast transports, the first being delivered to *Befehlsstelle Süd* on 30 December that year.



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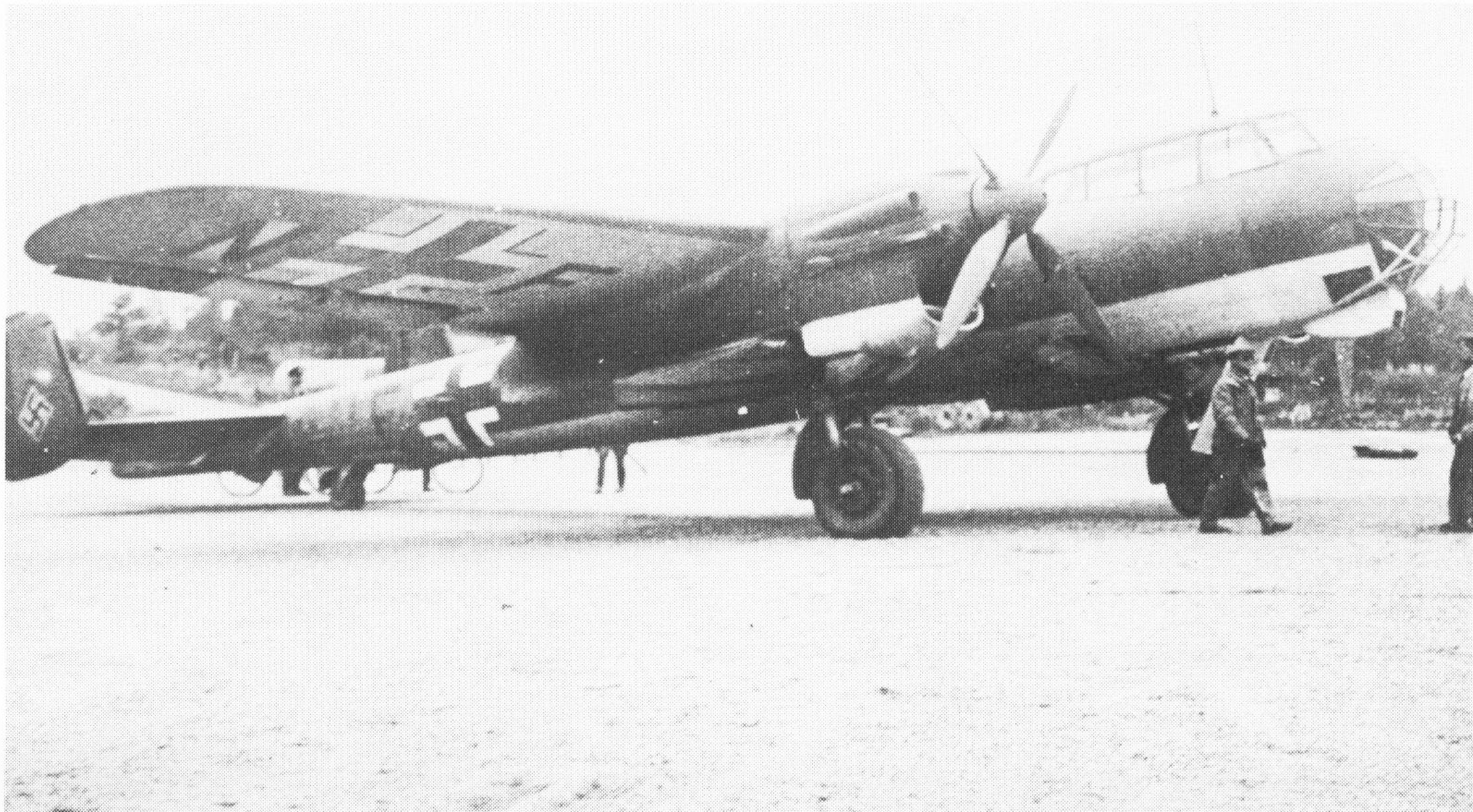
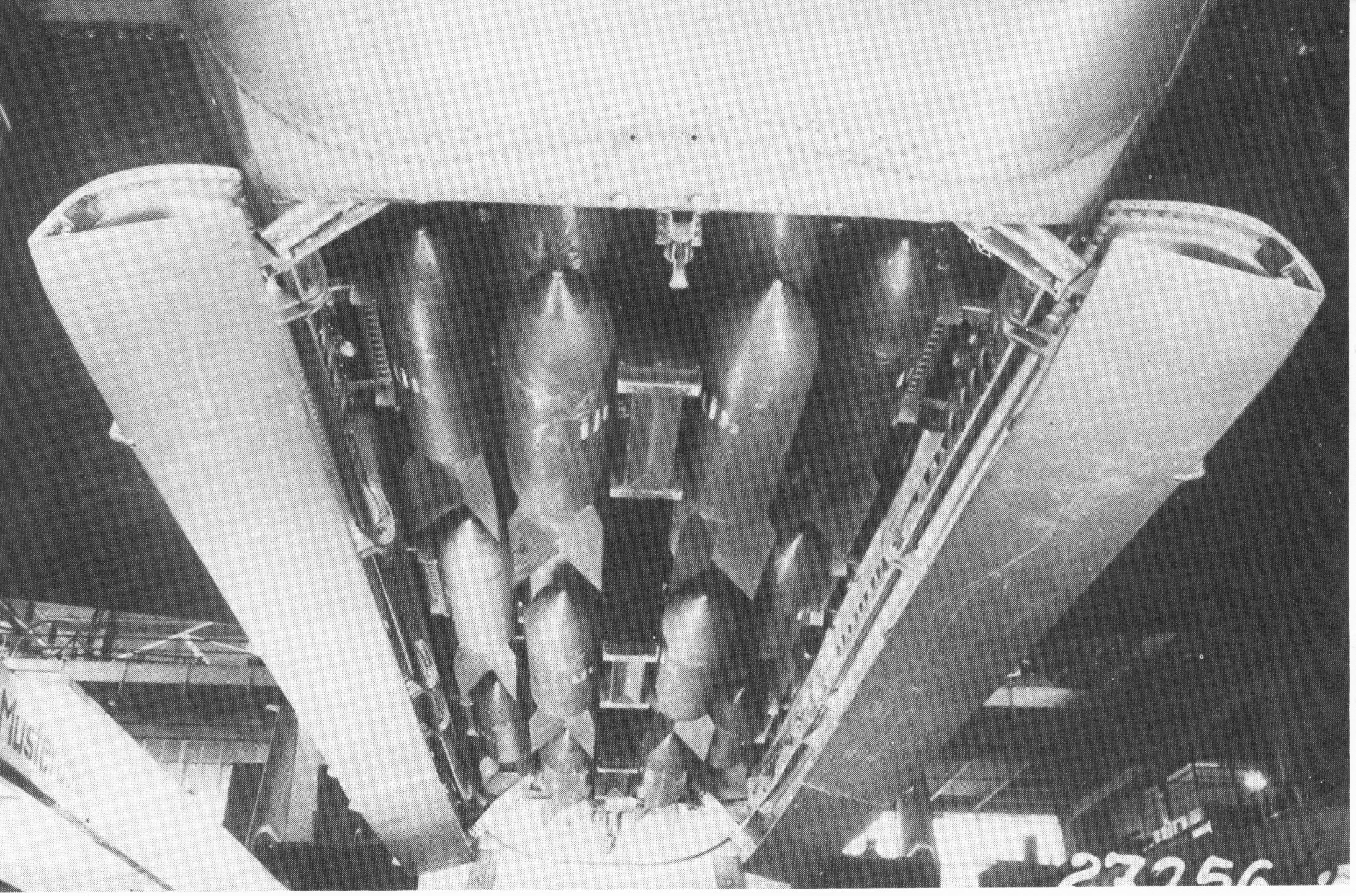
61. The Do 217C model was planned as a medium bomber. Nine aircraft, beginning with *WerkNr* 2710 (NF+UU), were produced between September and November 1940. Except for 2711, which became a trials aircraft for a parachute dive brake system early in 1941, the bombers became semi-operational with the *Luftwaffe* in the west or were used for trials at Rechlin; a few were employed on liaison duties in Norway. The C-0 was the first Dornier bomber to be equipped with the redesigned, tail-mounted air brake.





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62. This close-up photograph shows the bomb bay of the Do 217C-0. The aircraft normally carried four SC 500s or twelve SC 50s. Proposals were made to fit eighteen SC 50s or other equivalent load in the bomb bay, and after minor modifications it proved possible to mount two SC 1000s, or one SC 1000 and two SC 500s. The C-0 was flown with the Revi 12C reflecting gun sight and the Lotfe C7A bomb sight. External bomb racks were found not to be necessary. The defensive armament of the Jumo 211B-powered aircraft comprised five MG 15s.

63. Development work on the Do 217 took place at both Löwenthal and Rechlin. The Do 217E V1, V4, V7 and V11, together with eight early Do 217E-1s, were flown at Rechlin; and at least ten further prototypes were tested at Löwenthal, where this photograph was taken, including (left to right) the eighth E-1, the later Do 217R V1 (TC+ZC, *WerkNr* 1029, which was rebuilt from a 217E-1) and the prototype Do 217E-1 (CO+JO).

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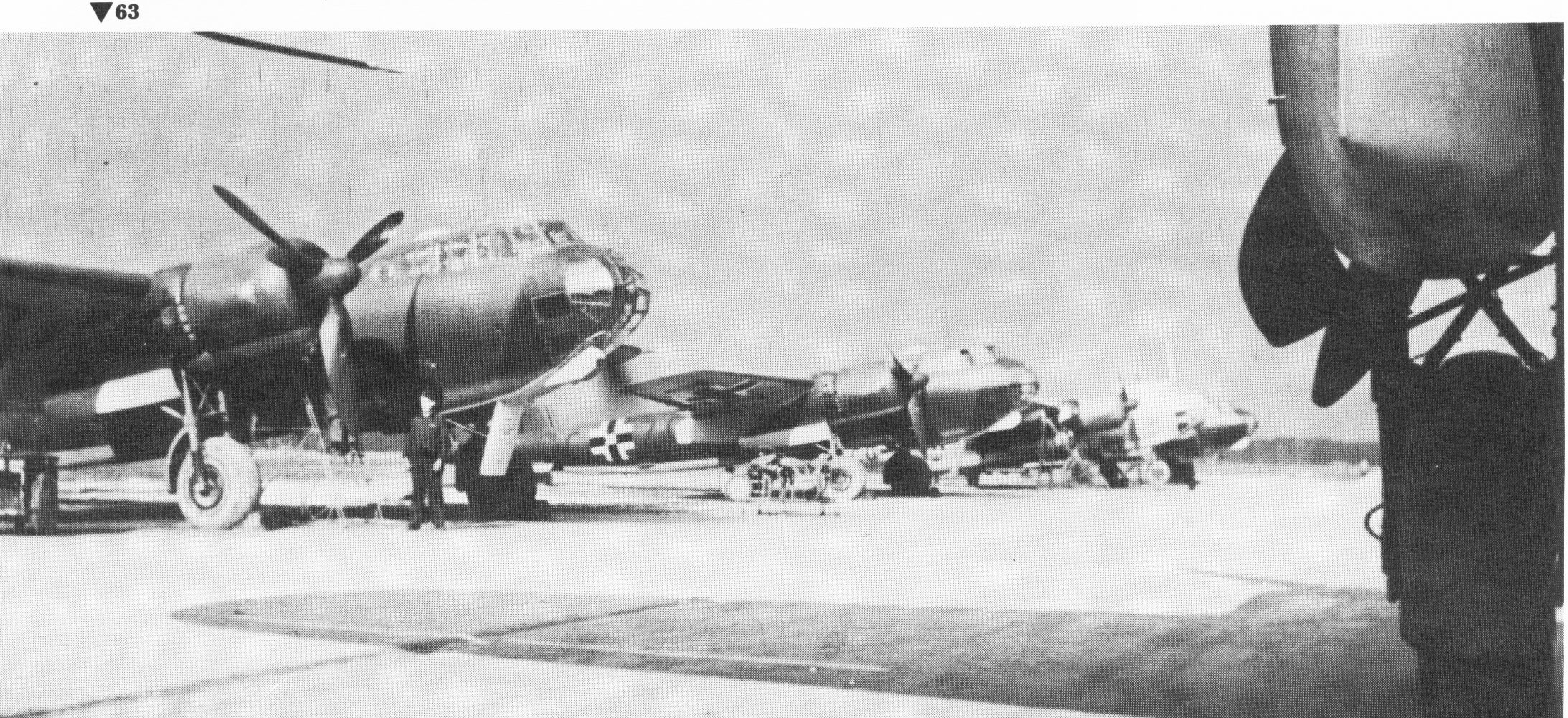

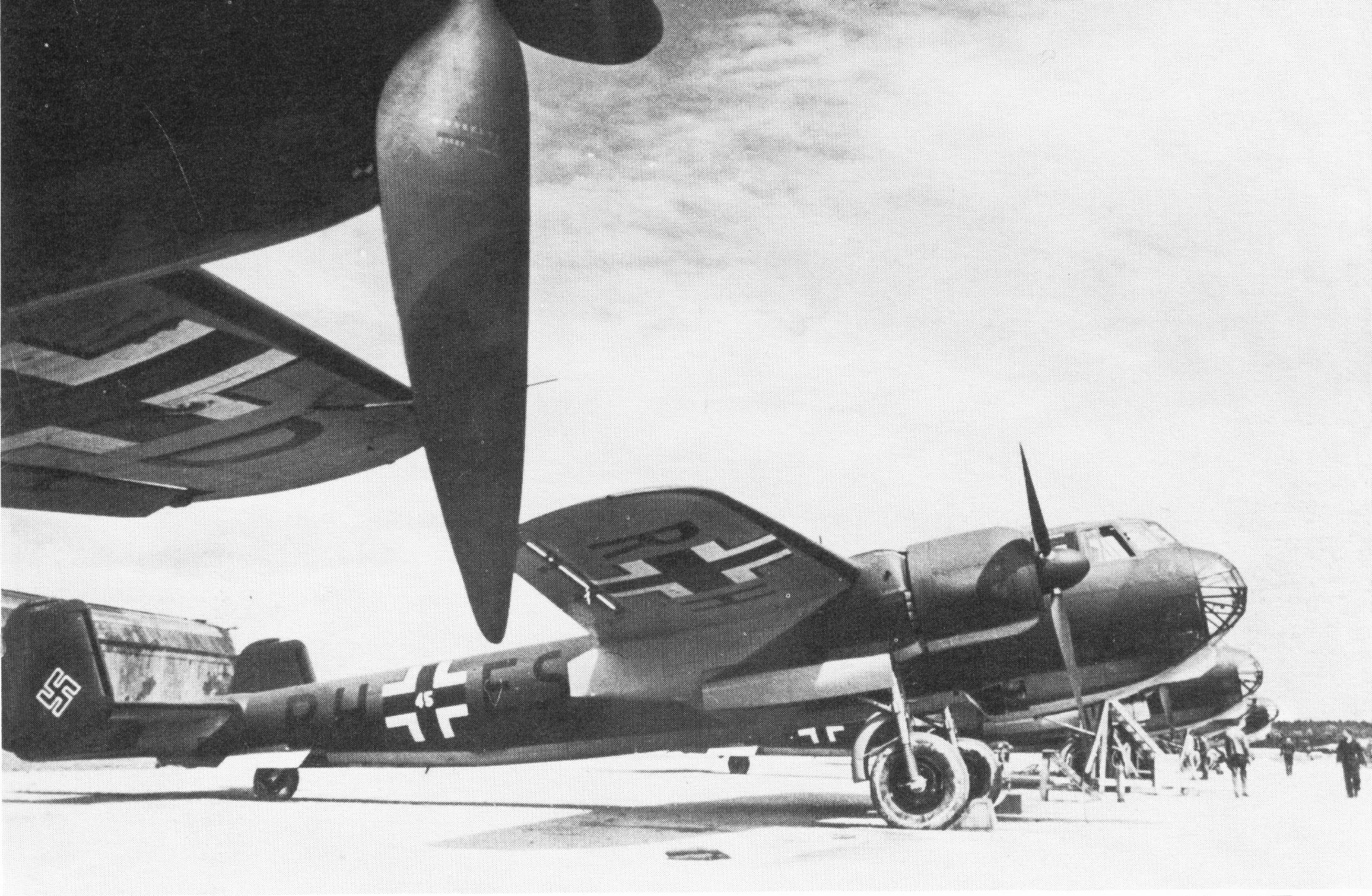

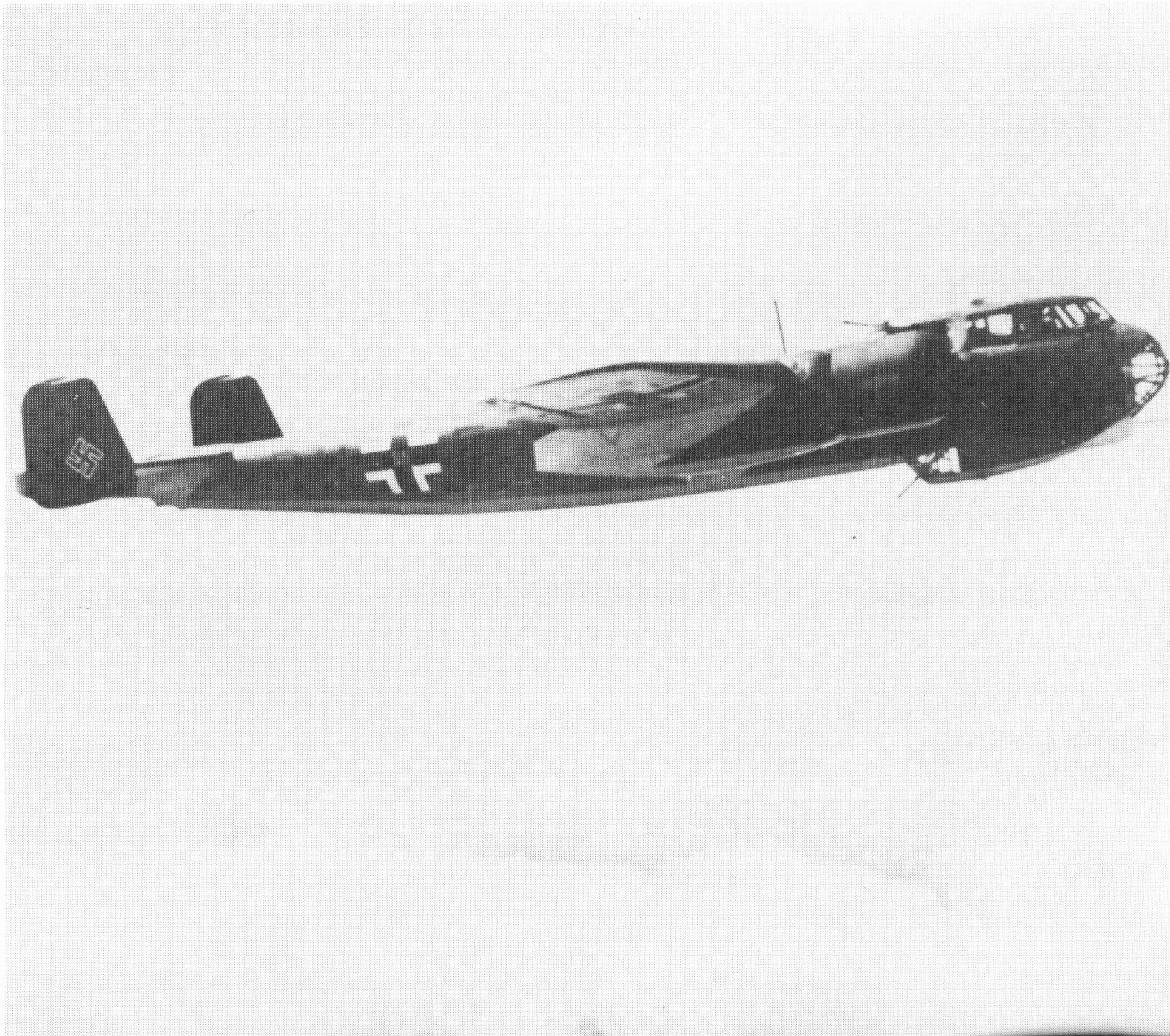

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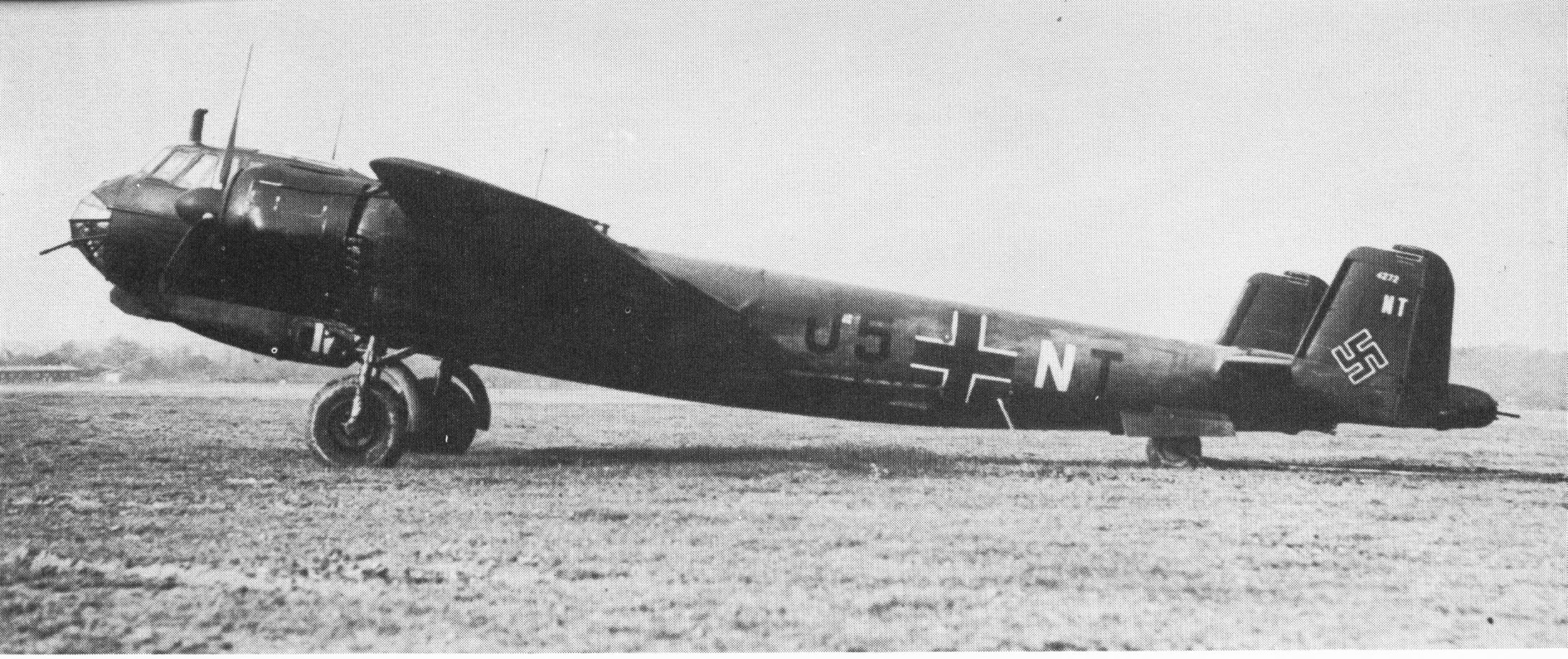
64. Another photograph taken at Friedrichshafen, this one showing some early Do 217E-2s. The first E-2s were test-flown in March 1942, the first production aircraft receiving the code RE+CA and subsequently being issued to KG 40 as F8+GP; this aircraft was reported missing in action on 2 February 1942.

65. All the Friedrichshafen-built Do 217E-1s and E-2s were test-flown over southern Germany. The E-2 shown is *WerkNr* 1136 (RH+EJ), later transferred to the famous KG 2 (*'Holzhammer'*); this unit saw service mainly over the English Channel and British Isles, up to the summer of 1944. The aircraft is still painted in the *Werkschutzanstrich* factory finish.



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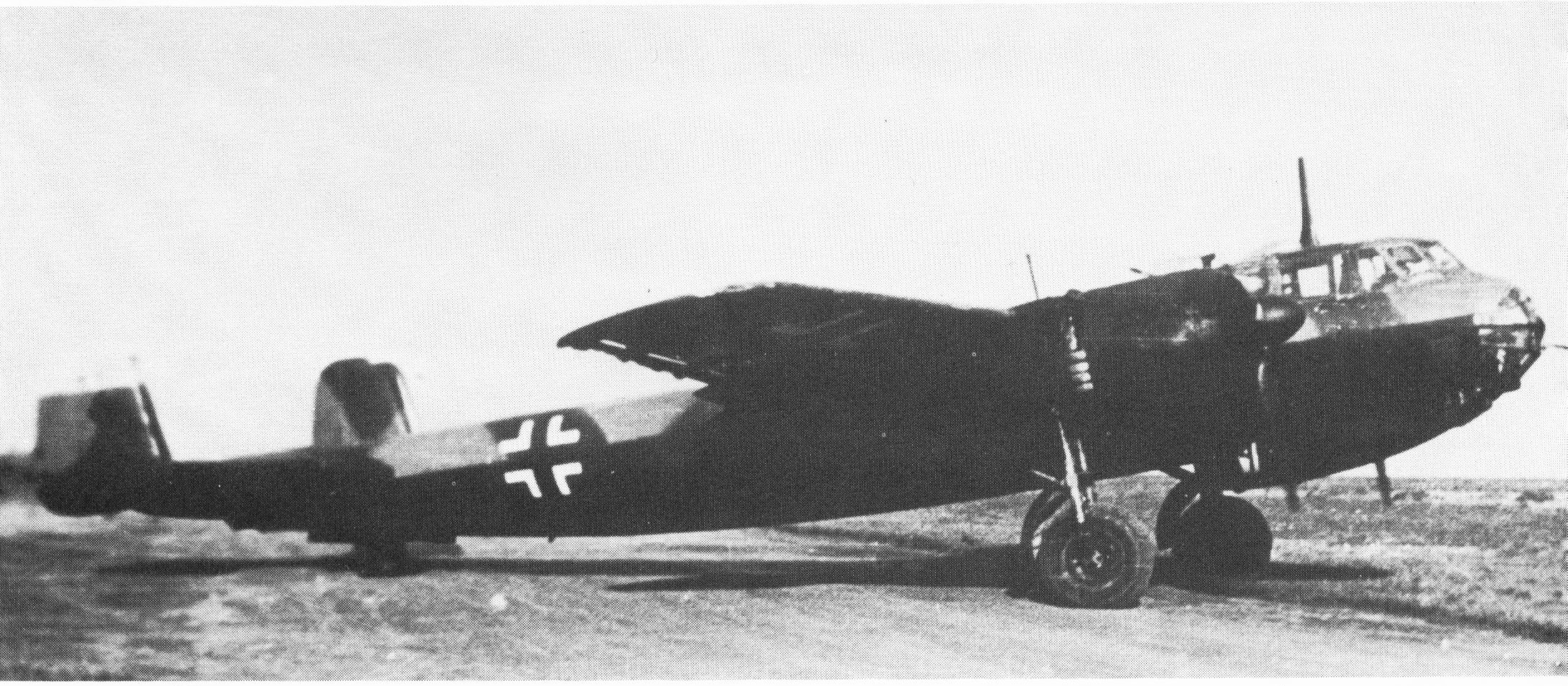

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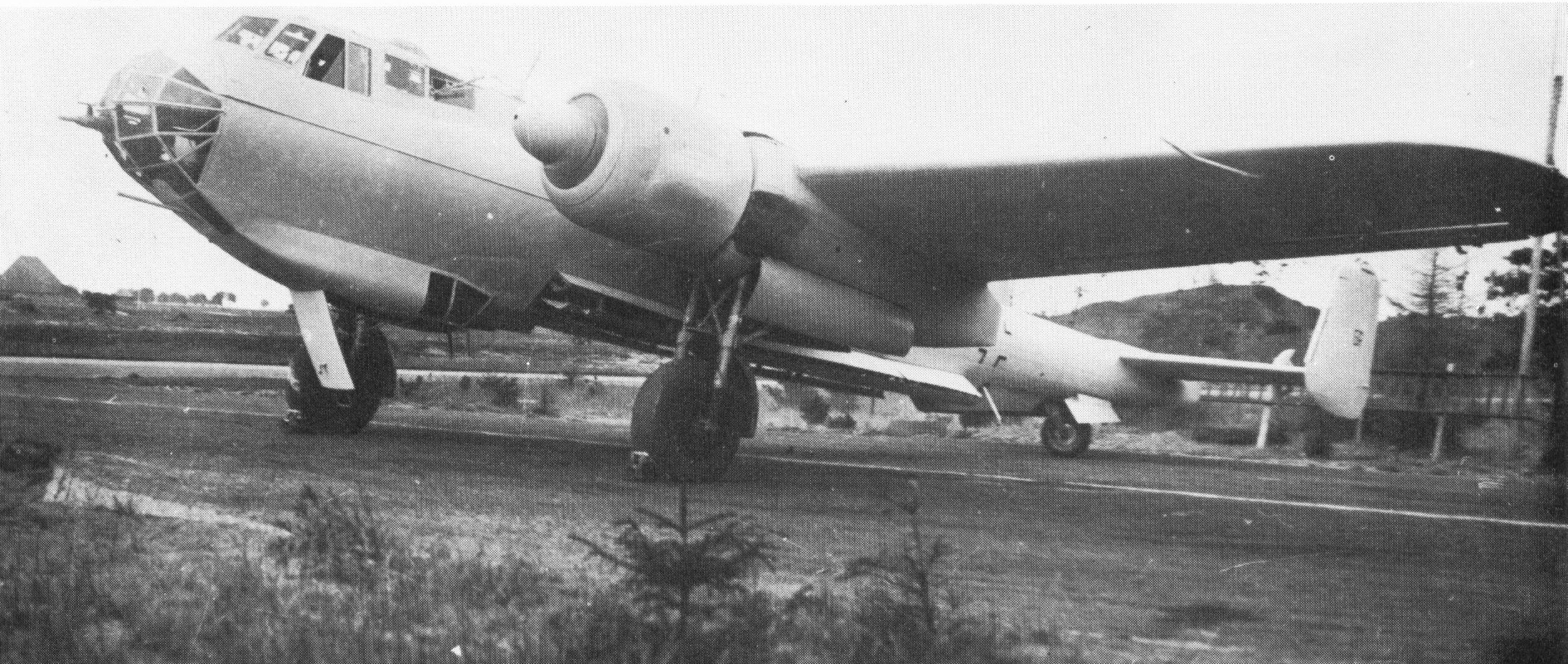


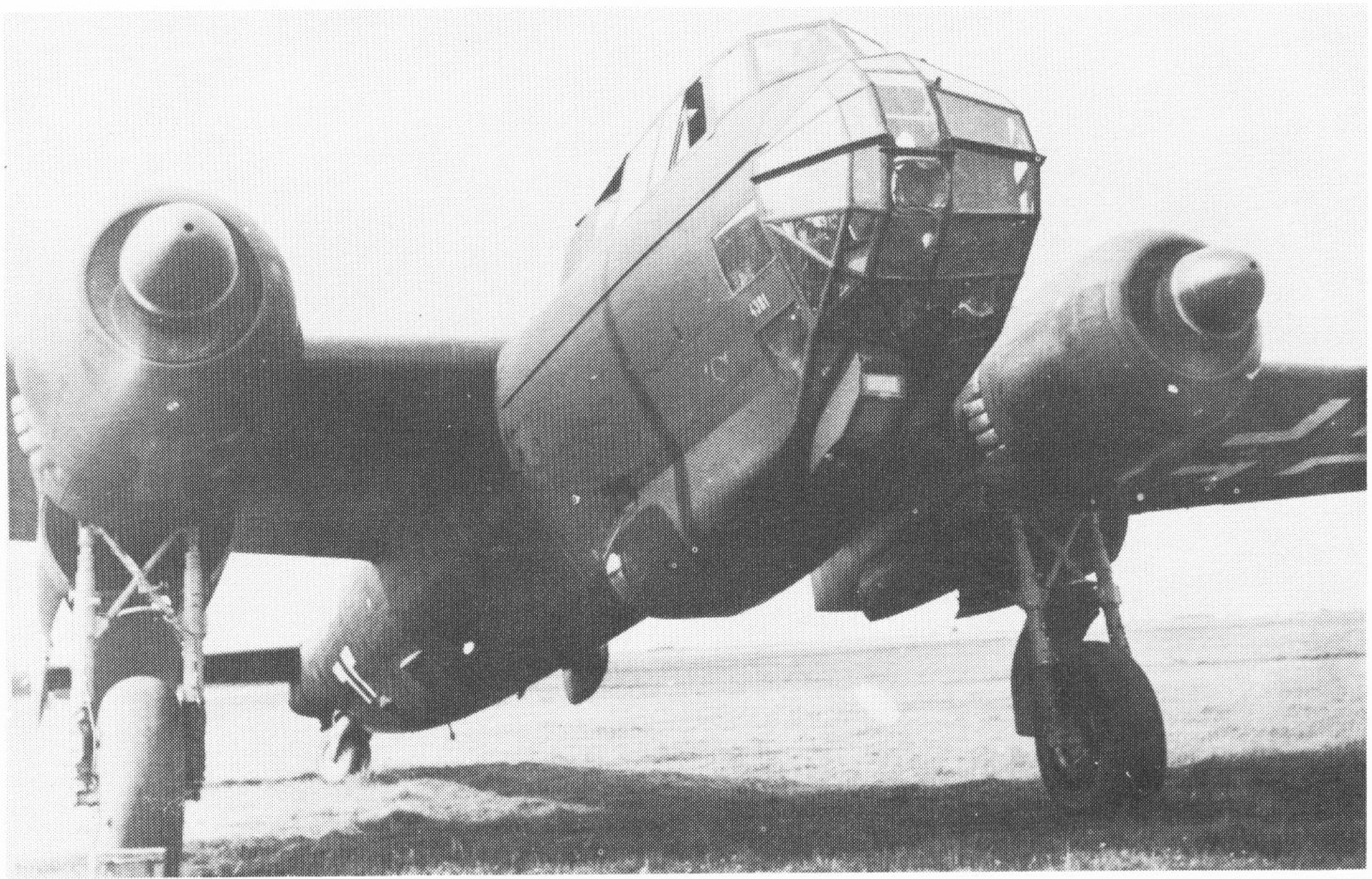
66. Aircraft U5+NT (*WerkNr* 4272) was flown with a special tail armament consisting of a single MG 81Z. Only three Do 217E-2s were so modified, by the TO (Technical Officer) of the ninth *Staffel*, the other aircraft being 4320 and 5524; all three were tested at Soesterberg during late October 1942 and were subsequently re-converted to standard configuration.

67. A Do 217E-2 of I/KG 6, one of the few German pathfinder units, equipped with special navigation instruments and the 'Y' system for precision bombing, especially during periods of bad weather or at night. The *Staffeln* of KG 6 operated a small number of Do 217K-1s, some Ju 188E-1s (often with upper gun turrets removed) and the faster Ju 88.

68. One of the Do 217E-4 anti-shipping aircraft which appeared in the West, conducting low-level attacks over the English Channel; this aircraft, U5+GR, was operated by 7/KG 2. Complementing the 20mm MG FF, an MG 151/20 was installed in the nose. The aircraft is painted blue-grey overall as a more effective camouflage measure.

69. In May 1942 this Do 217E-4 (F8+BM) of 4/KG 40 carried out a night bombing raid over Great Britain. The 'Baedecker Raids' were initiated on 28 March 1942 after the RAF had attacked Lübeck, although the first actual mission was flown on 23 April when 45 German bombers tried to set Exeter aflame; the next day 60 aircraft, mainly Do 217Es of KG 2, took off to attack Bath.

70. The aircraft of II/KG 40, together with those of the *'Holzhammer-Geschwader'* (KG 2), were based at Soesterberg. This Do 217E-2 of the 5th *Staffel* (*WerkNr* 5502, F8+FP) was lost on 8 September 1942 during a raid over England; in an earlier incident, recorded here, it suffered a collapsed undercarriage whilst landing at its home base.



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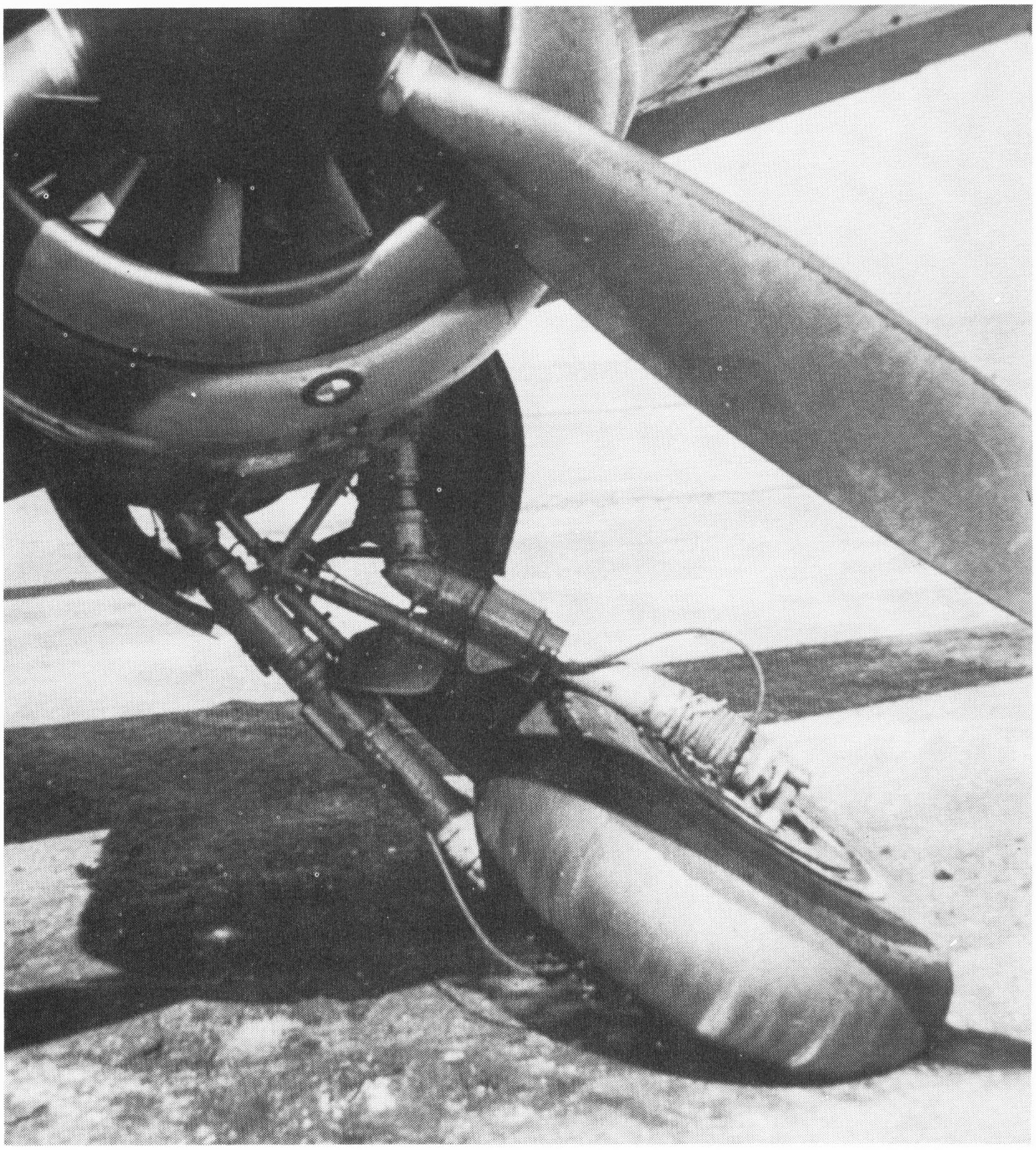

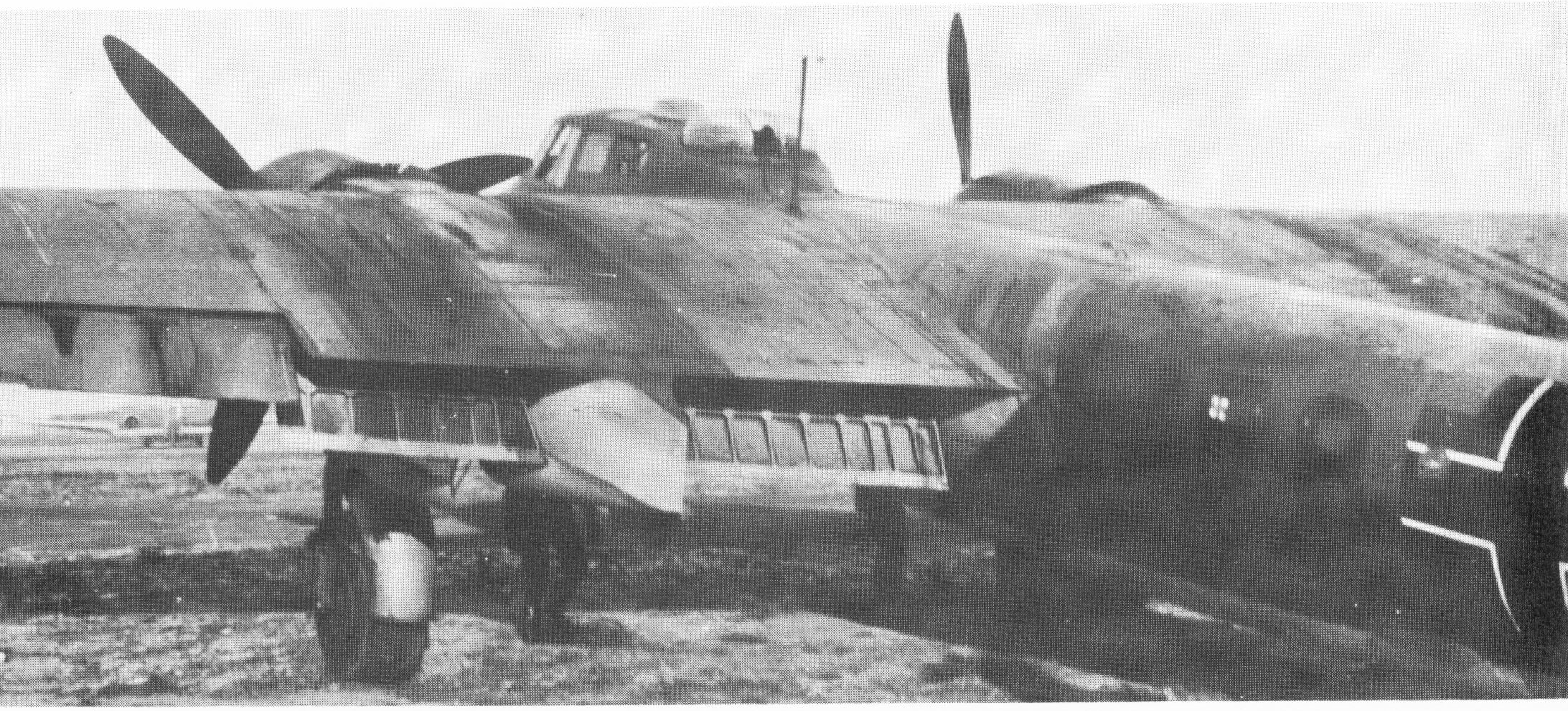

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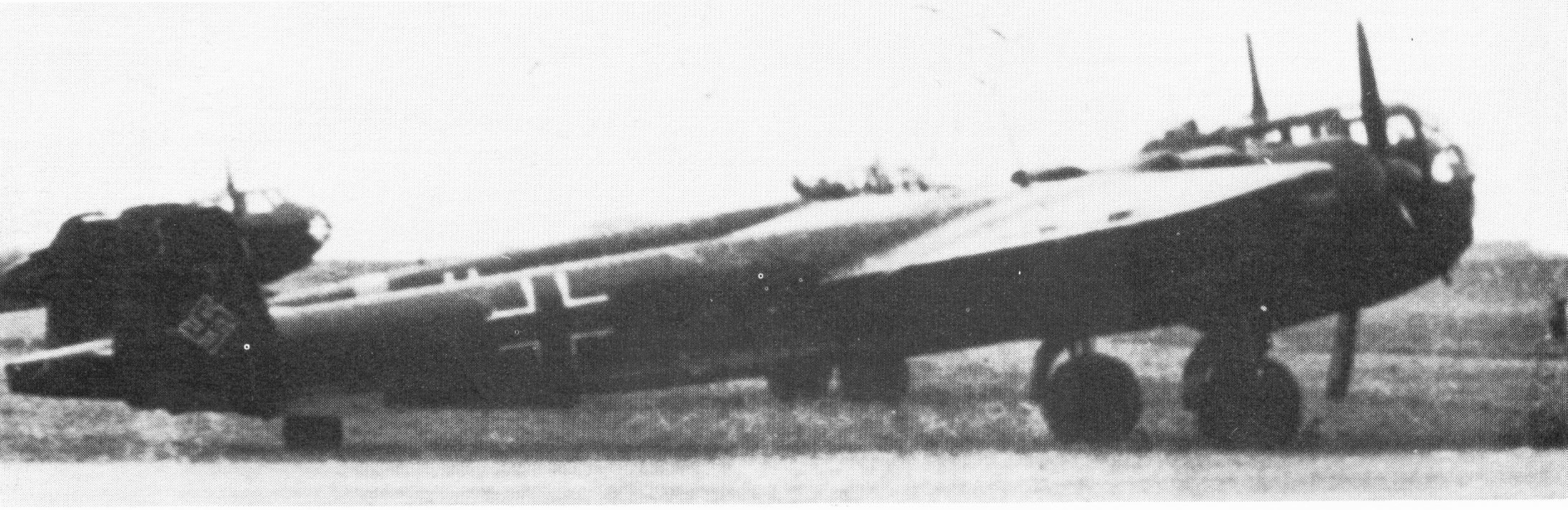

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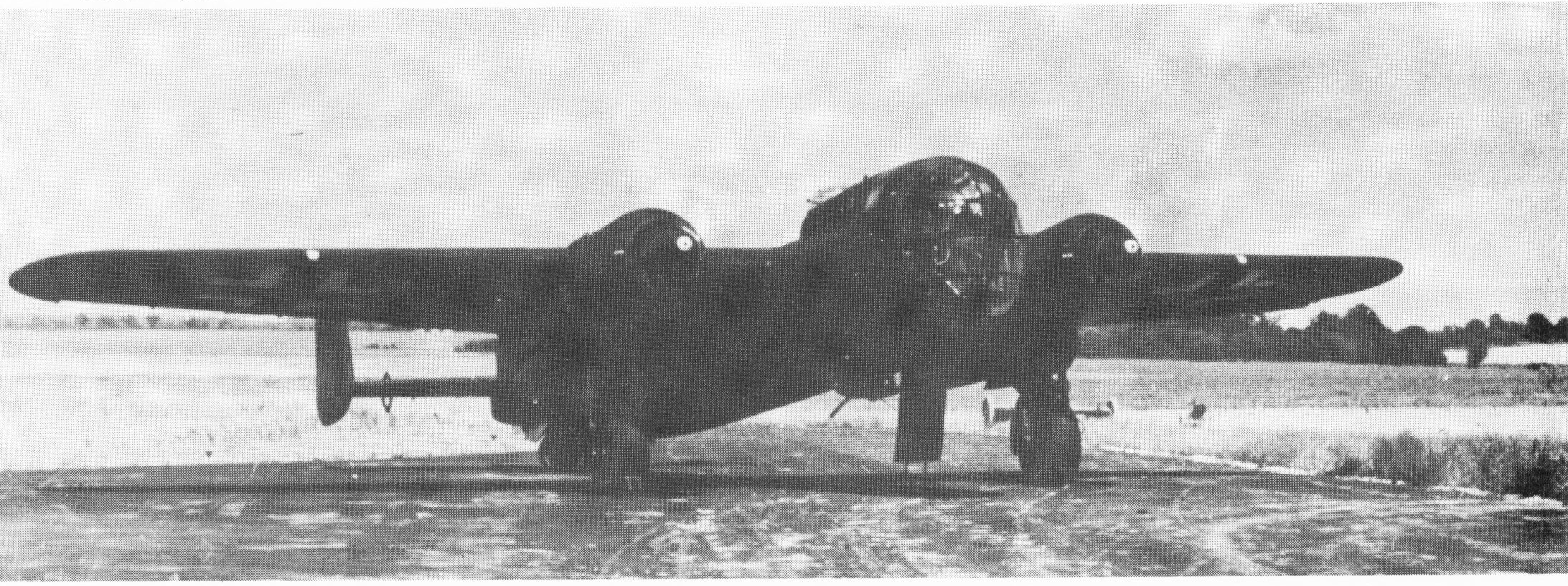
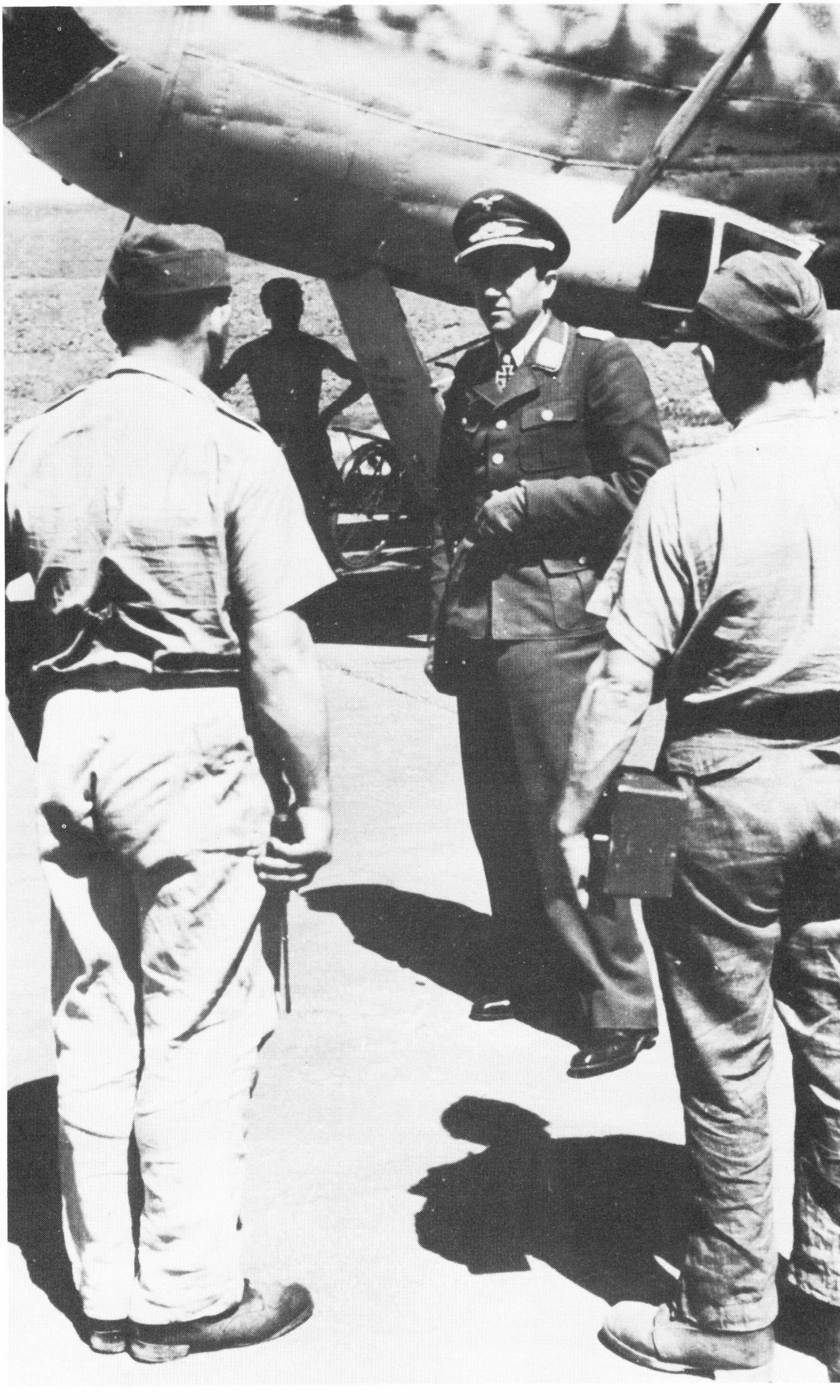


71. One of the Do 217E-2s that flew with II/KG 100 over northern Europe, this aircraft (F8+KM) was in fact operated by the fourth *Staffel* of KG 40. It made a rough landing following damage sustained during a mission over the British Isles in 1942 and, after the BMW 801ML engines and armament had been removed, was taken to a *Luftwaffen-Feldwerftabteilung* for repair.

72. A Dornier Do 217K-1, a Ju 88 and a Do 217E-2 of the first *Staffel* of KG 6, at Rouen in France, 1943. The fuselage sides of pathfinder aircraft were painted black; no successful daylight raids over Britain were possible after 1942.

73. A 1943 photograph of one of the last Do 27K-1s of I/KG 6, prior to its return to the Reich for modification into either a reconnaissance aircraft or a glide-bomb carrier. After handing over its last Do 217s and Ju 188s, the *Gruppe* was issued with the lightly armed Ju 88S-1 bomber, becoming operational again towards the end of 1943 – just in time for Operation 'Steinbock' early in 1944.

74. *Major* Bernhard Jope, commander of KG 100, standing before his personal Do 217K-3 at Toulouse early in 1944. This unit expended 108 Fritz X and 392 Hs 293 glide bombs against important shipping targets and selected land positions.



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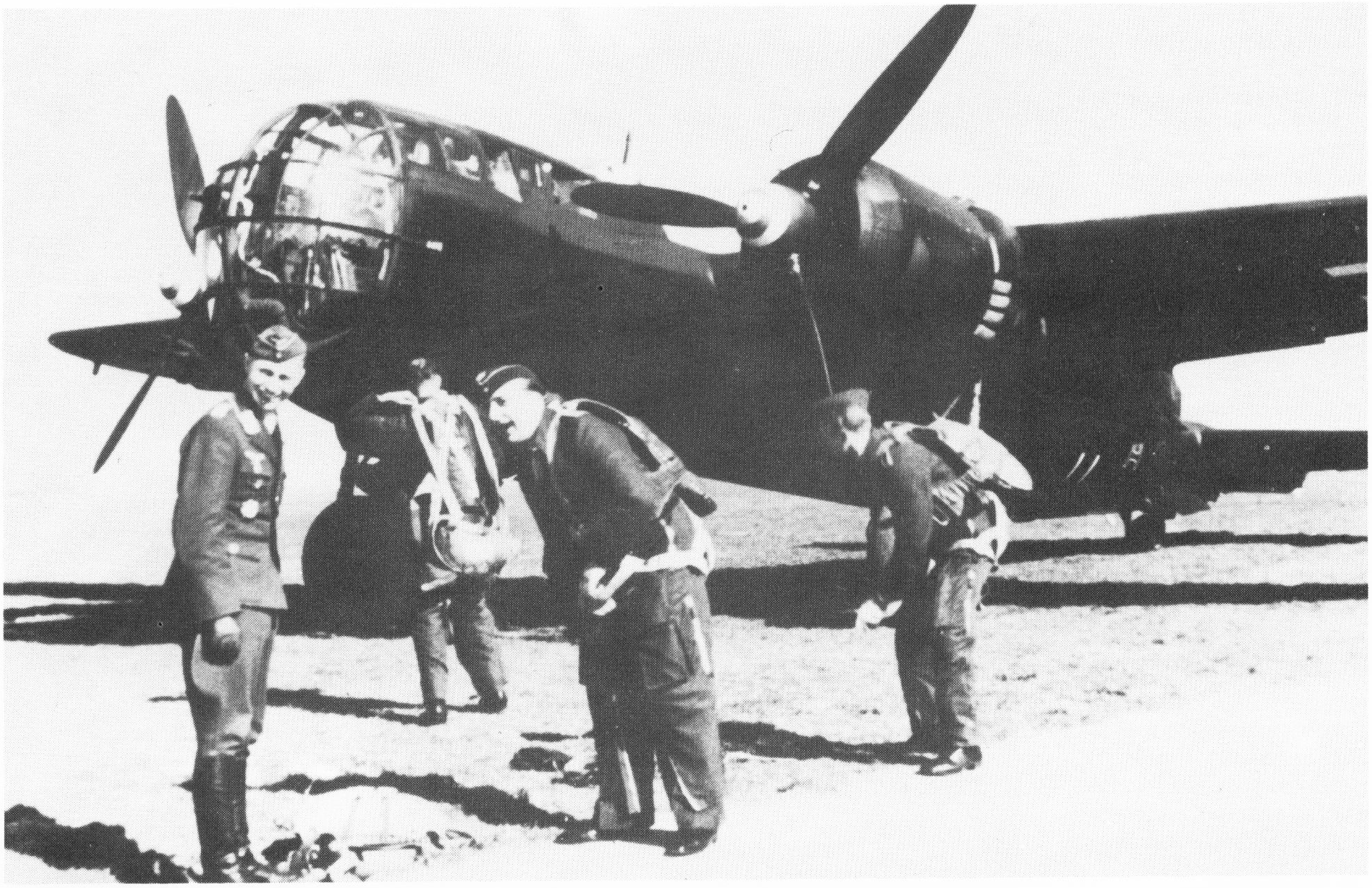

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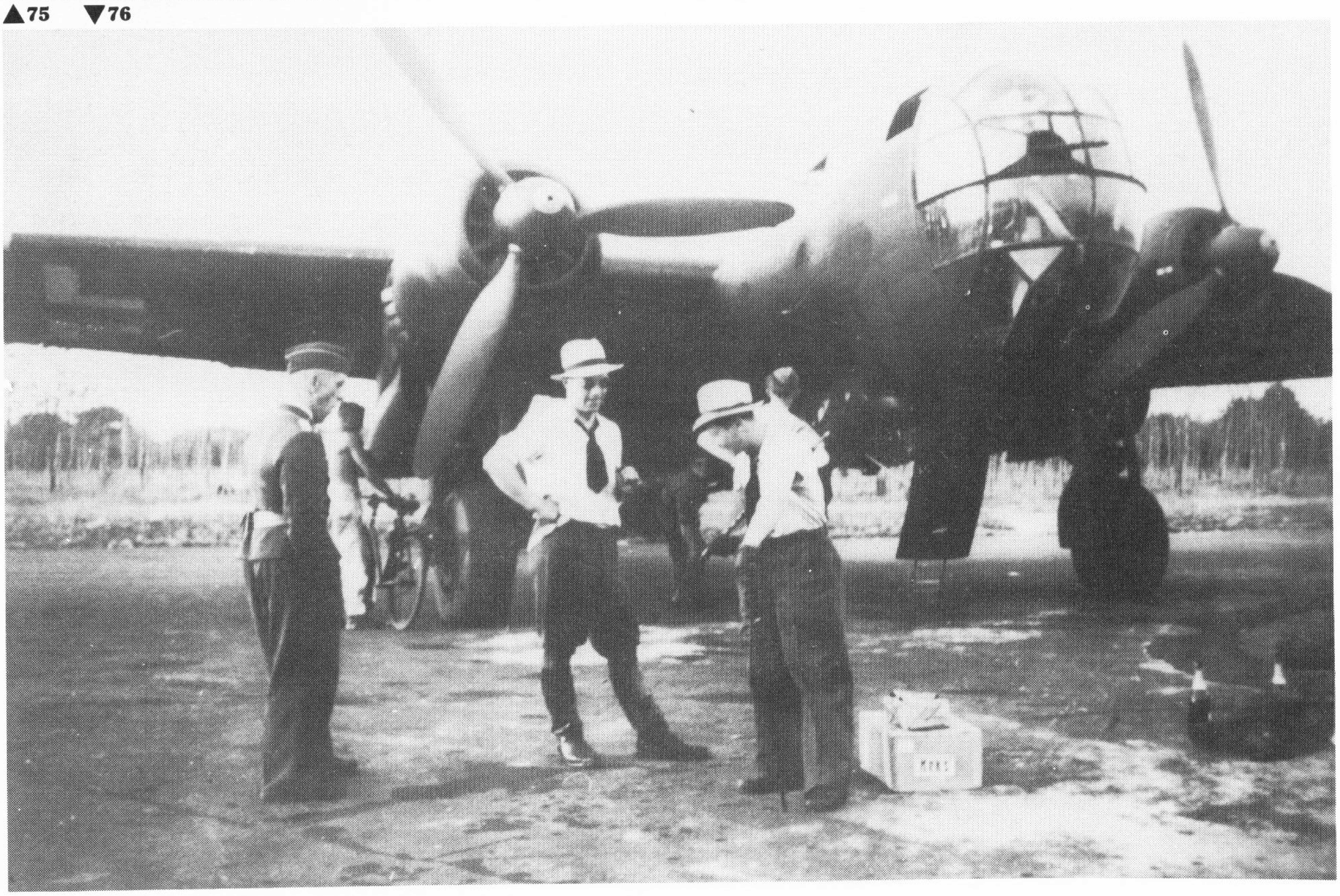
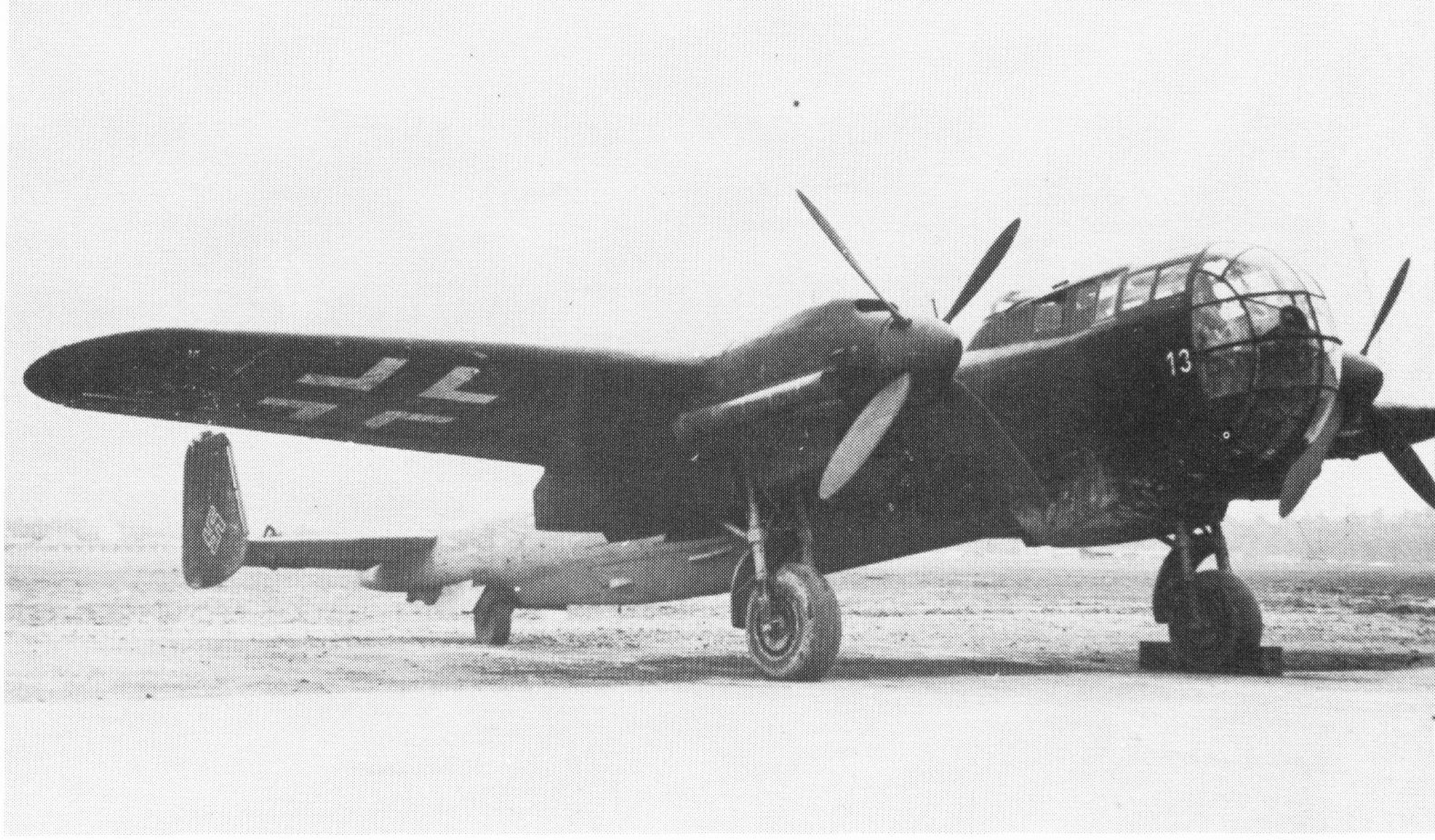


75, 76. All three operational *Gruppen* of KG 2 were equipped with the Do 217K-1 by mid-April 1943. The subsequent training flights resulted in the removal of nearly all the parabrakes fitted to the aircraft, and many of the bombers received an MG 131 instead of the two MG 81s in the nose station.

77. Do 217M-1s were flown to Melun, near Paris, by personnel of the third *Staffel* en route to KG 2's front-line bases, and for a few months these aircraft formed the principal equipment of some KG 2 *Staffeln* in France and the Netherlands, flying several sorties over Great Britain. This photograph shows DN+UE (*WerkNr* 56013) with flame-damping exhaust shrouds, June 1943.

78, 79. Following trials with flame-dampers using Do 217M-1 56013, most of the M-1s in Western Europe were retrofitted with these *'Flammenvernichter'*. although their installation led to a 10–15kph speed penalty. Both these Do 217M-1s were assigned to 7/KG 2 and saw active service flying from bases in the Netherlands during 1943.



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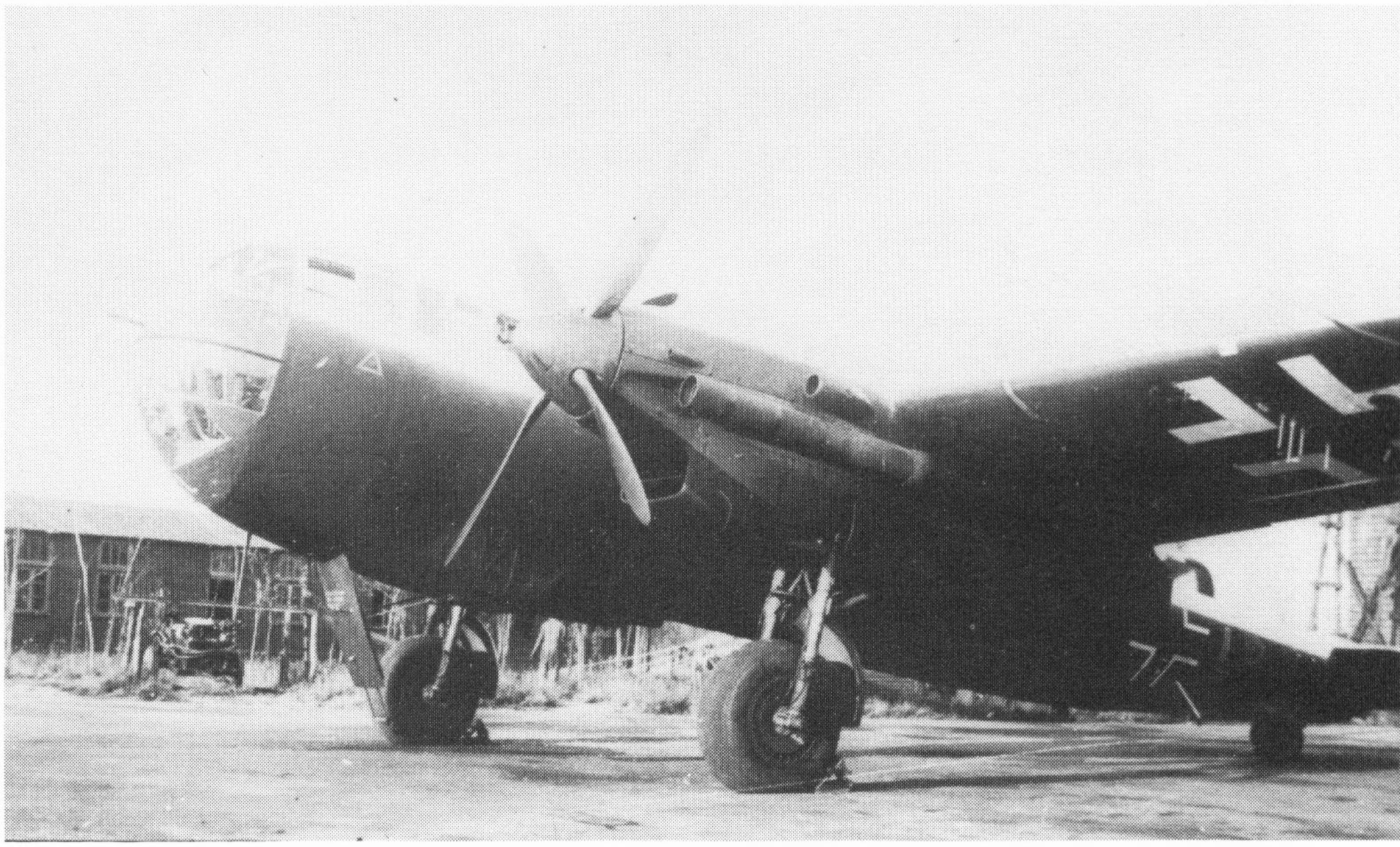

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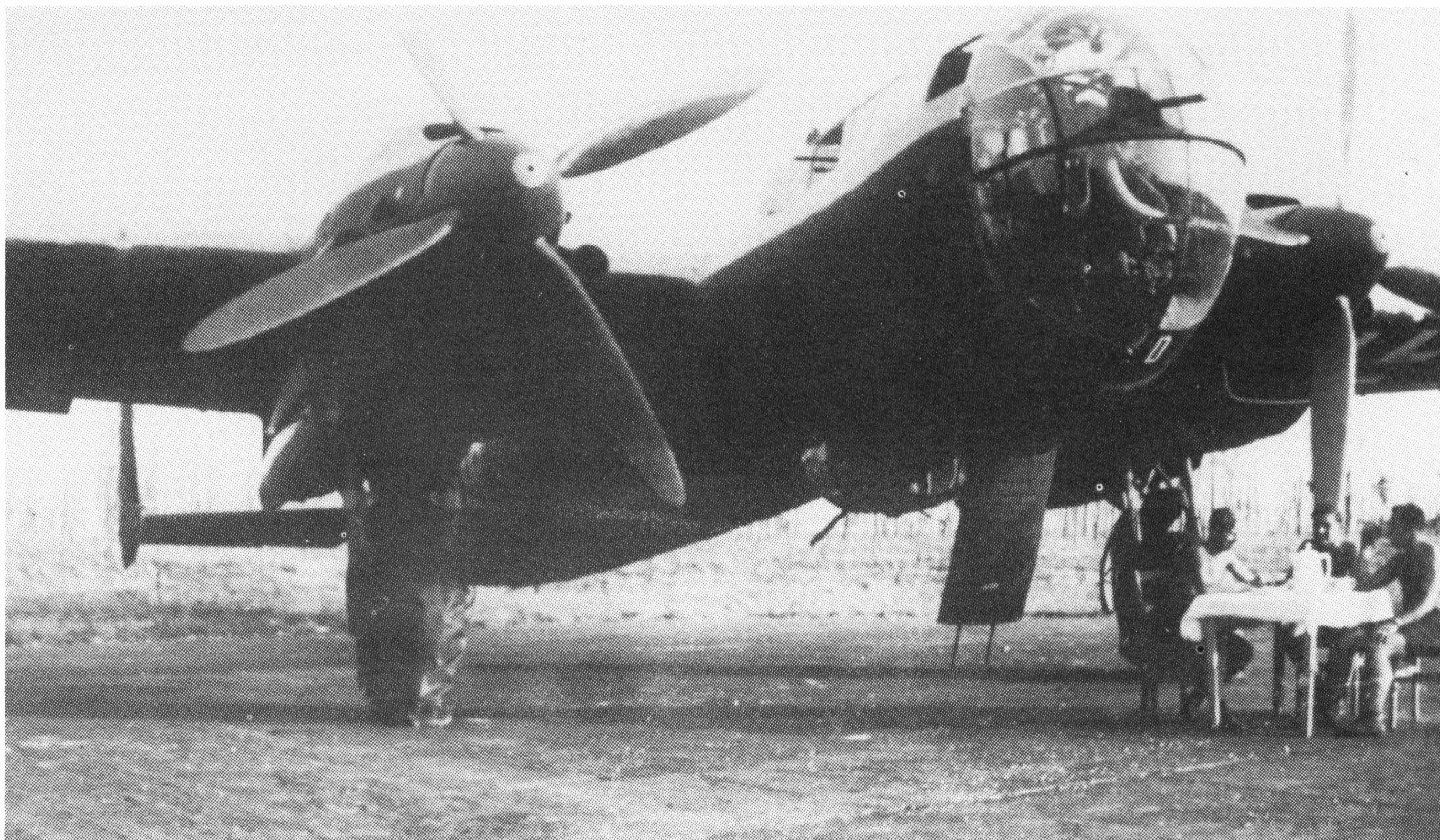

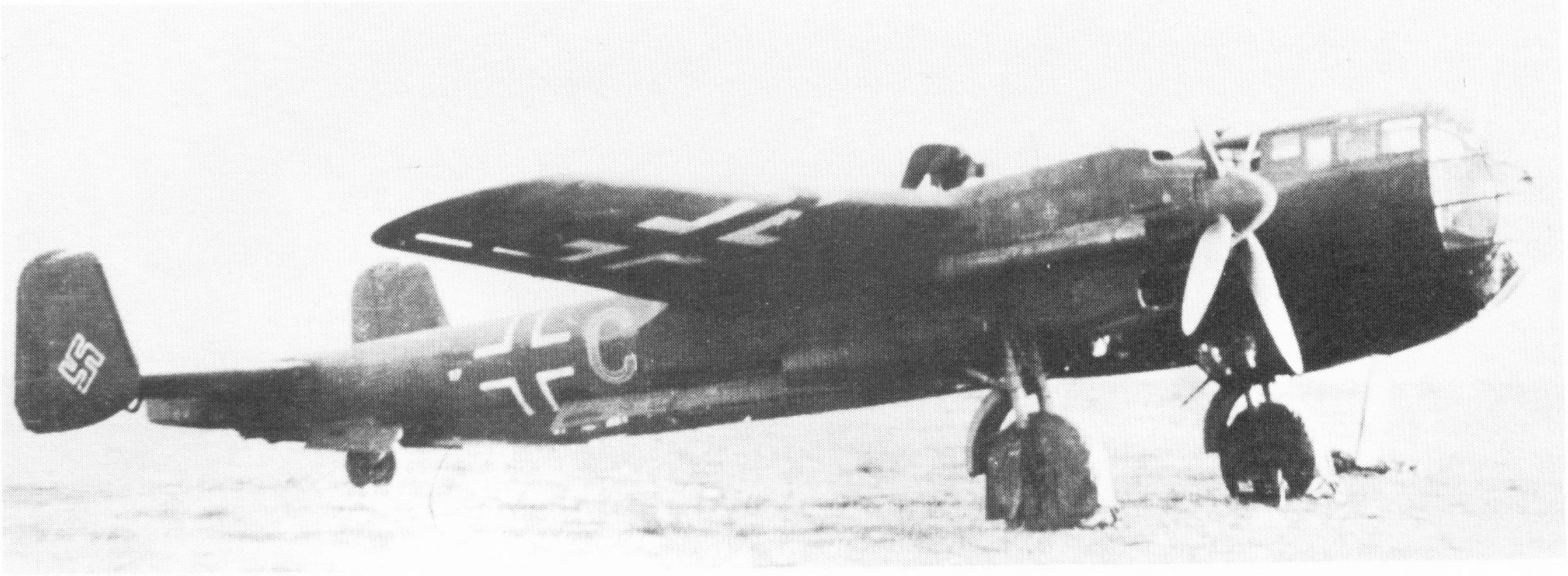

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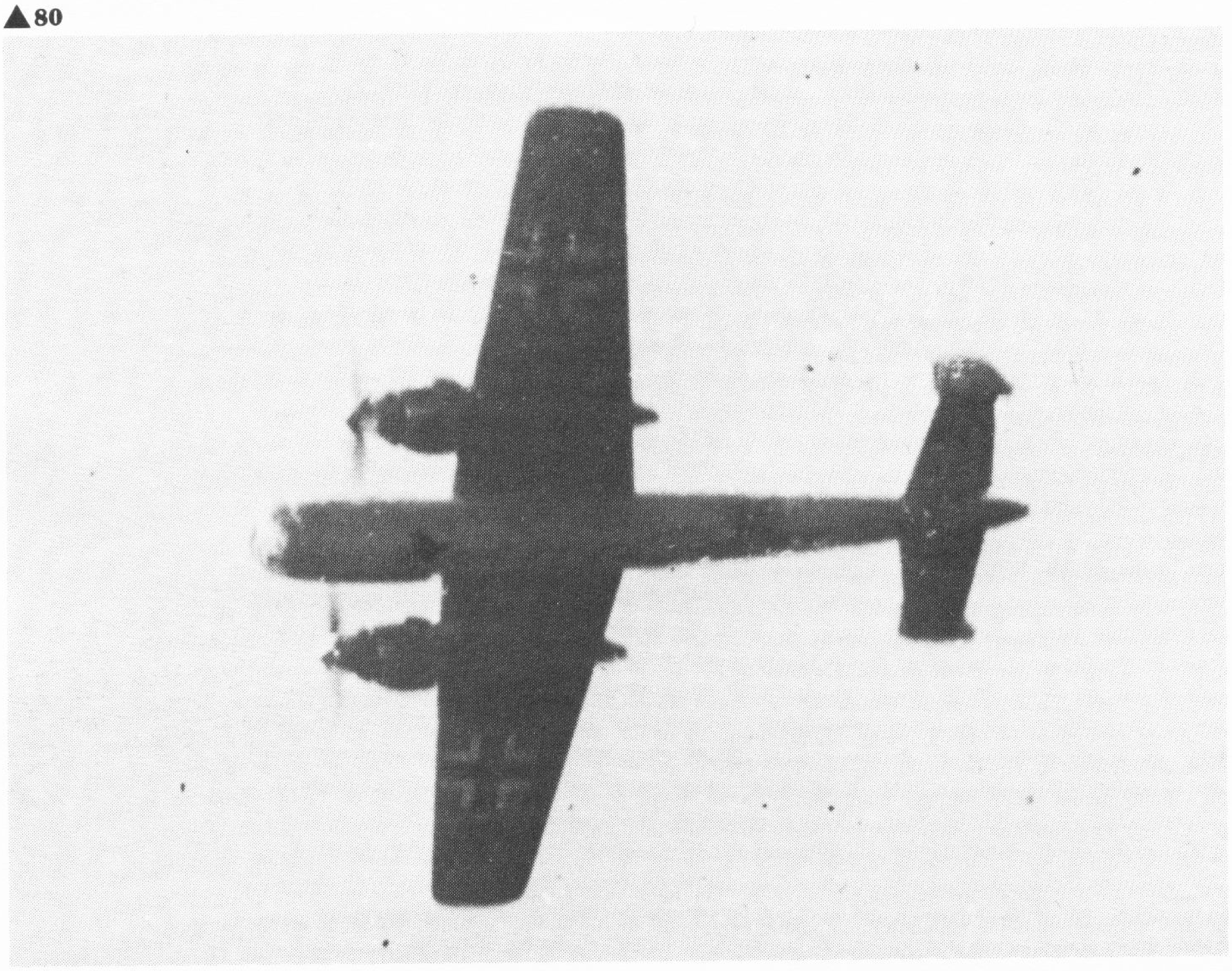

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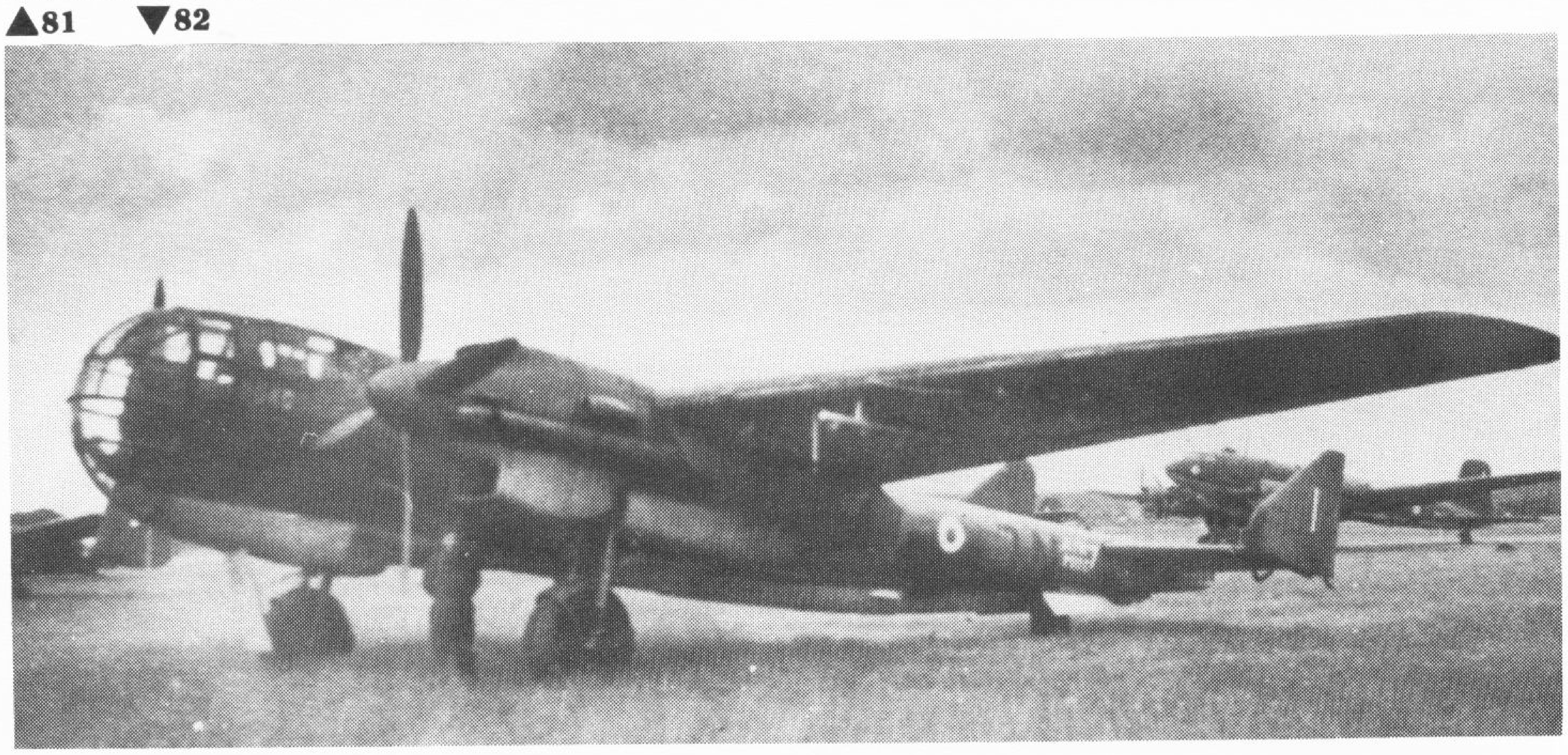

80. The *Aufklärungsgruppe Nacht* was established specifically for night reconnaissance duties, for which it was initially equipped with the Do 17P; later, its five *Staffeln* were re-equipped with the Do 217 and Ju 188. The unit code was K7. By the end of the war the *Aufklärungsgruppe* had been reorganized: apart from a sole *Staffel* in the West, it fought under the command of *Fernaufklärungsgruppen* 2 and 3 in the region assigned to *Luftflotte* 6. In addition to night reconnaissance missions the unit carried out low-level attacks against the advancing Soviet Forces until April 1945.

81. Possibly the only Do 217M-3. This aircraft, also known as the Do 217M-02, was flown at *Erprobungsstelle* Rechlin with newly designed 59m^2 wings and was the second pre-production M-1 model. The wings were later modified again: the aircraft was rebuilt early in 1943 with new 67m^2 wings and also a revised tail unit. From June 1943 BD+KP (*WerkNr* 1242) was used to test the Messerschmitt P8 variable propeller, fitted later to the revolutionary Do 335.

82. The Do 217M-9 was a *'Kampfflugzeug mit Sonderwaffenlage'*, i.e. a guided-weapons carrier, as were the Do 217K-2 and K-3. Only a limited number of M-9s were built, possibly just trials aircraft. They were armed with three MG 131s and an additional MG 81I on

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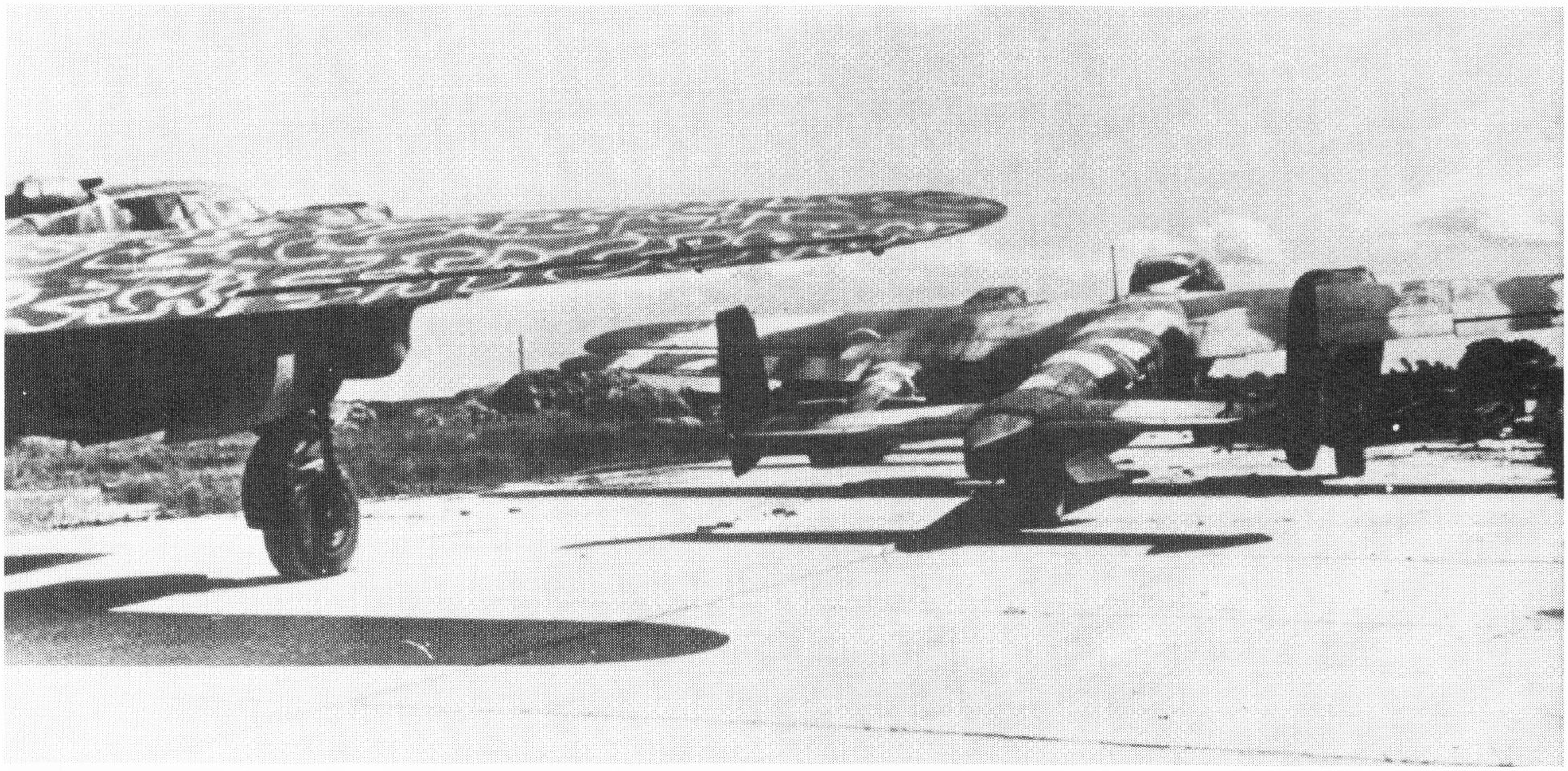
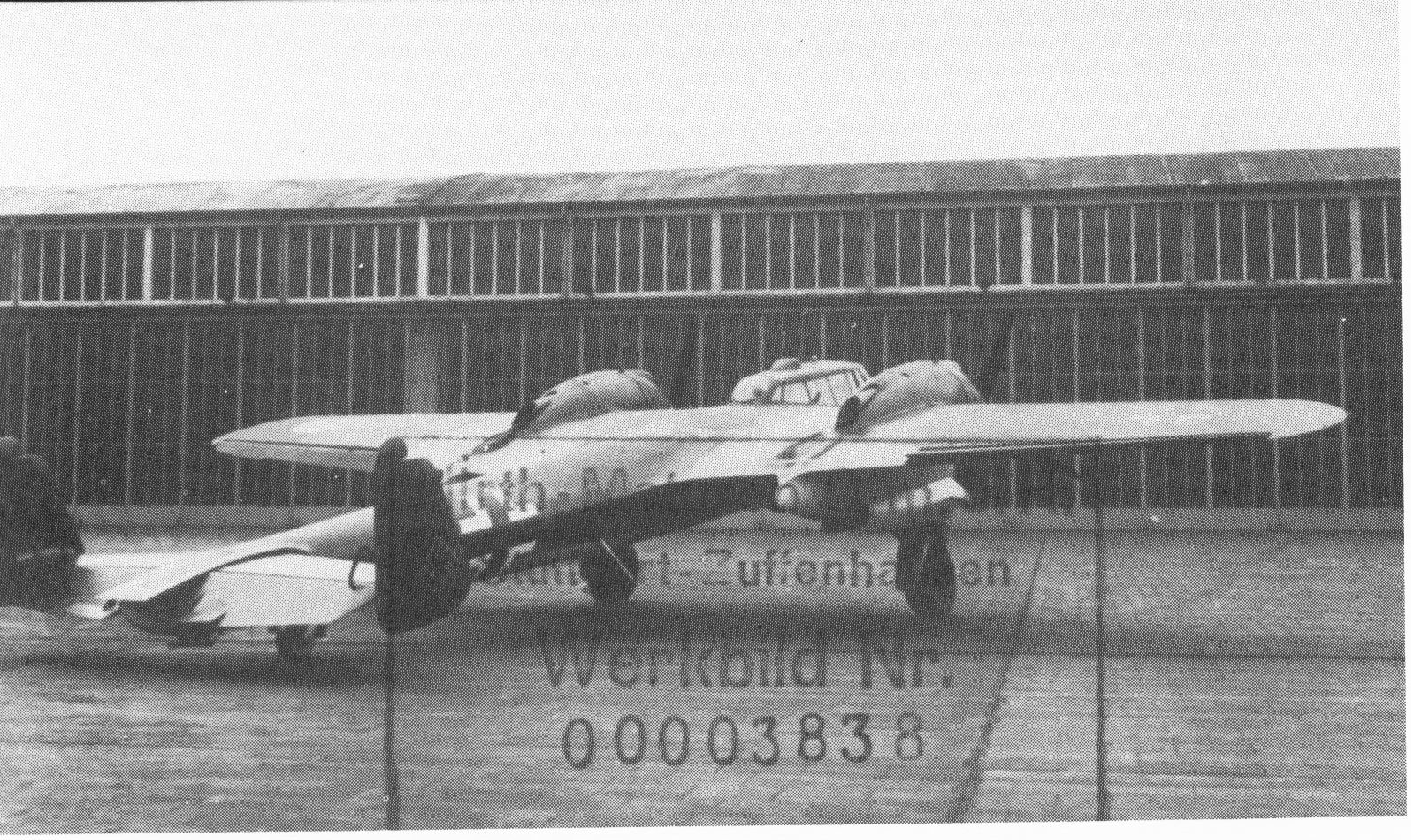


each side of the cockpit. Besides its large 67m^2 wings, the M-9 was recognizable by its redesigned cockpit glazing and triangular vertical fins. KE+JN, *WerkNr* 0040, was captured by British ground forces at Flensburg in early May 1945; behind the Dornier bomber in this photograph are aircraft belonging to Hitler's *'Regierungsstaffel'*.

83. The Do 217M-11 was another special variant, converted from standard 217s and handed over to KG 100's *Staffeln* in the West. Most were shot down by Allied fighters during the invasion and in the course of the few German air raids over British territory in August 1944. Some aircraft crashed after returning to the Continent, while others fell victim to AA fire – such as 3028 of 7/KG 100, which was transferred from KG 2 to fly missions with a warload consisting only of small SD 1 and SD 10 anti-personnel bombs.

84. Very small numbers of Do 217s survived until the closing months of the war. Some, formerly allocated to KG 2, KG 100 and the *Nachtaufklärungsgruppe*, were concentrated in Denmark early in 1945, but fuel shortages severely hampered operations and only a few missions, by *Versuchskommando* 200, were carried out, against, for example, important bridges over the Oder and Weichsel using Hs 293A-1 missiles. Losses to AA fire and Soviet fighters were heavy, and rarely did the bombs find their targets.



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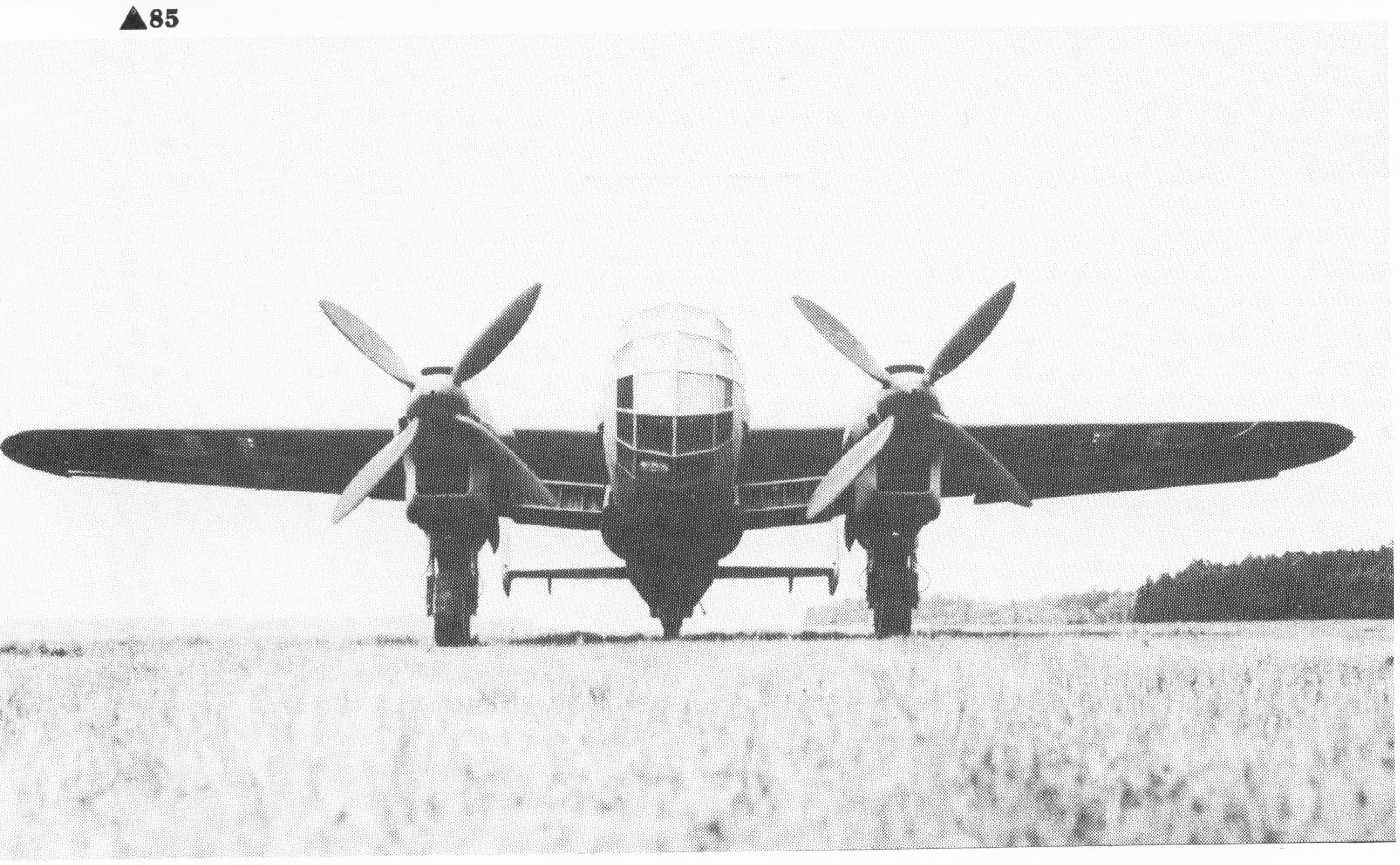

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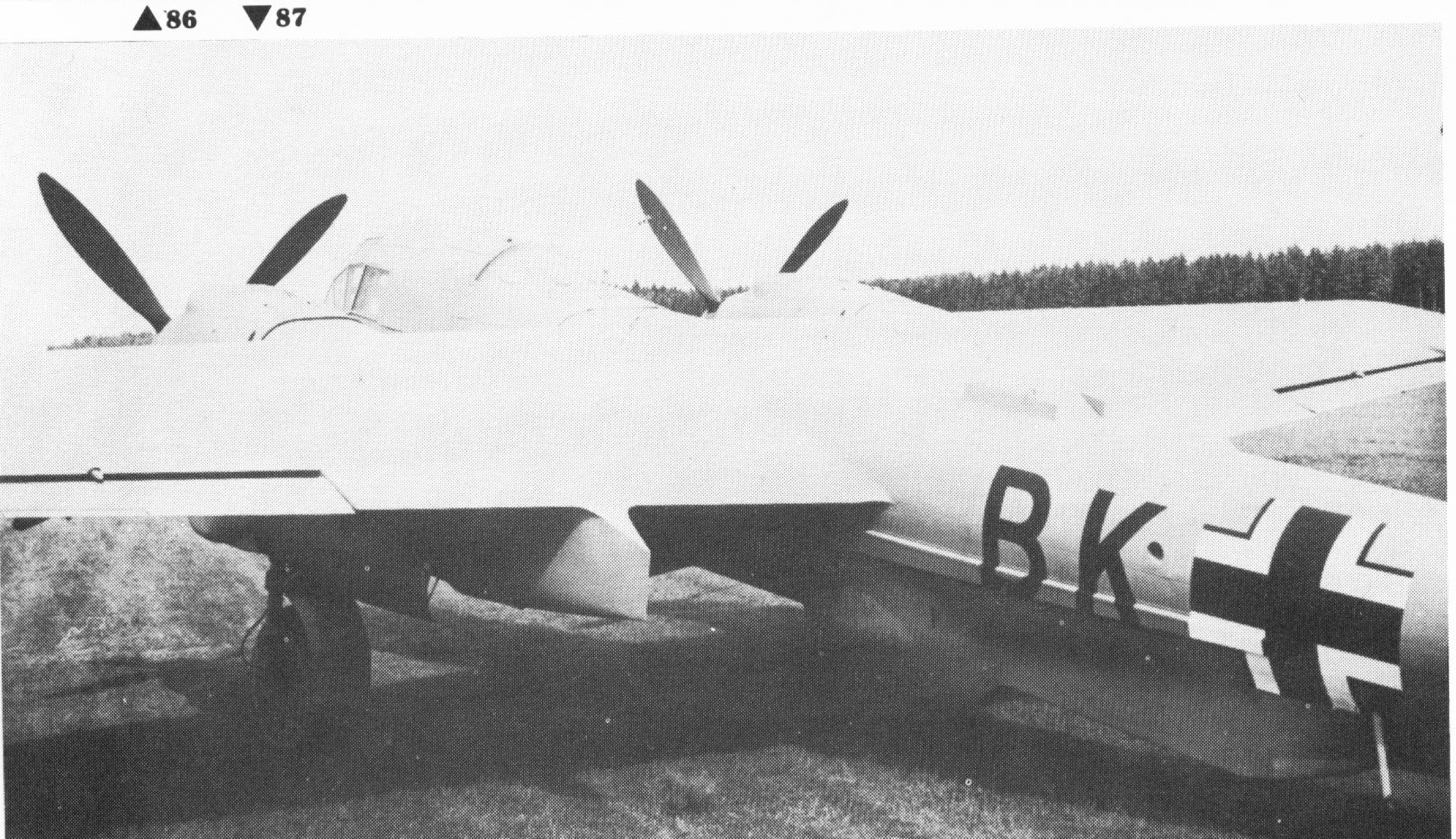
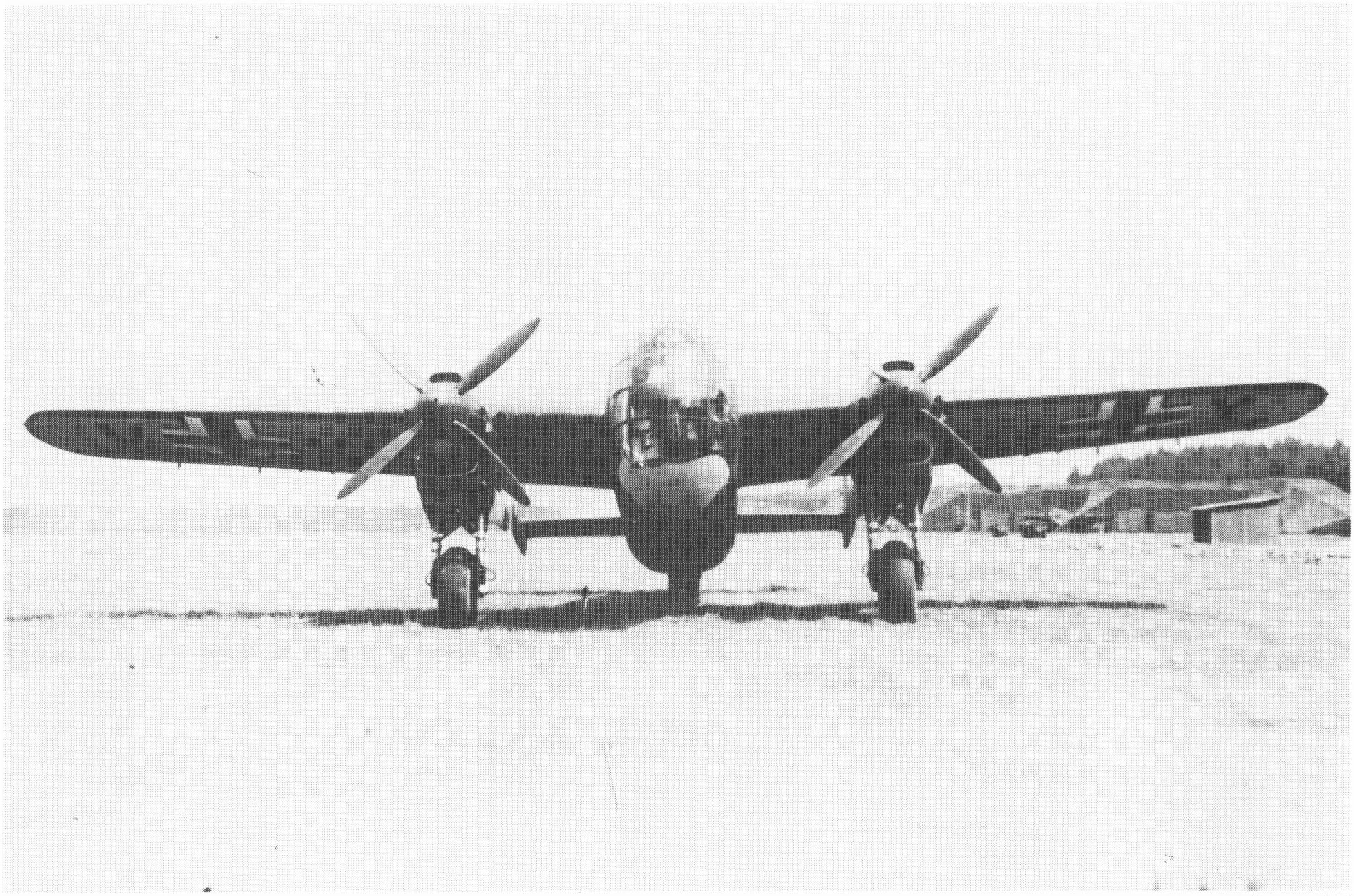


85. Only one example of the advanced Do 215B-6 bomber-reconnaissance aircraft was completed. The B-6 was equipped with TK 9 superchargers and fuel injection to enable it to reach great altitudes. Trials were conducted by Daimler-Benz at Stuttgart-Echterdingen, where the Do 217P and Hs 130 were also tested. An He 111H (*WerkNr* 2122, D-APZD) also took part in the programme, this modified aircraft flying at the end of December 1941.

86, 87. Two views of the Do 217P V1 (*WerkNr* 1229, BK+IR), a converted Do 217E-2 airframe which flew for the first time with a new pressurized cockpit on 6 June 1942. On 10 July that year the P V1 reached an altitude of over 33,000ft. The aircraft was subsequently fitted with a larger wing and with a *'Höhenladerzentrale'* – a third engine supplying compressed air for the two DB 603s. Many test flights were carried out in this guise up to 1943, and the aircraft eventually attained altitudes of about 40,000ft. Three other Do 217Ps were built, and four more were under construction in April 1943 but were never completed.

88, 89. The Dornier Do 317 was an entrant in the *'Bomber B'* competition sponsored by the RLM, which, three years after inspecting a mock-up of the aircraft and a multitude of design drawings, finally ordered, on 1 December 1941, three prototypes, along with five Focke Wulf Fw 191s and nine Junkers Ju 288s. All were fitted with the large Jumo 222, but problems with this powerplant caused delays to the entire programme. Coded VK+IY, the Do 317 V1 finally took to the air on 8 September 1943; shortly afterwards the RLM directed that the aircraft, plus all the components for the second prototype, be scrapped.



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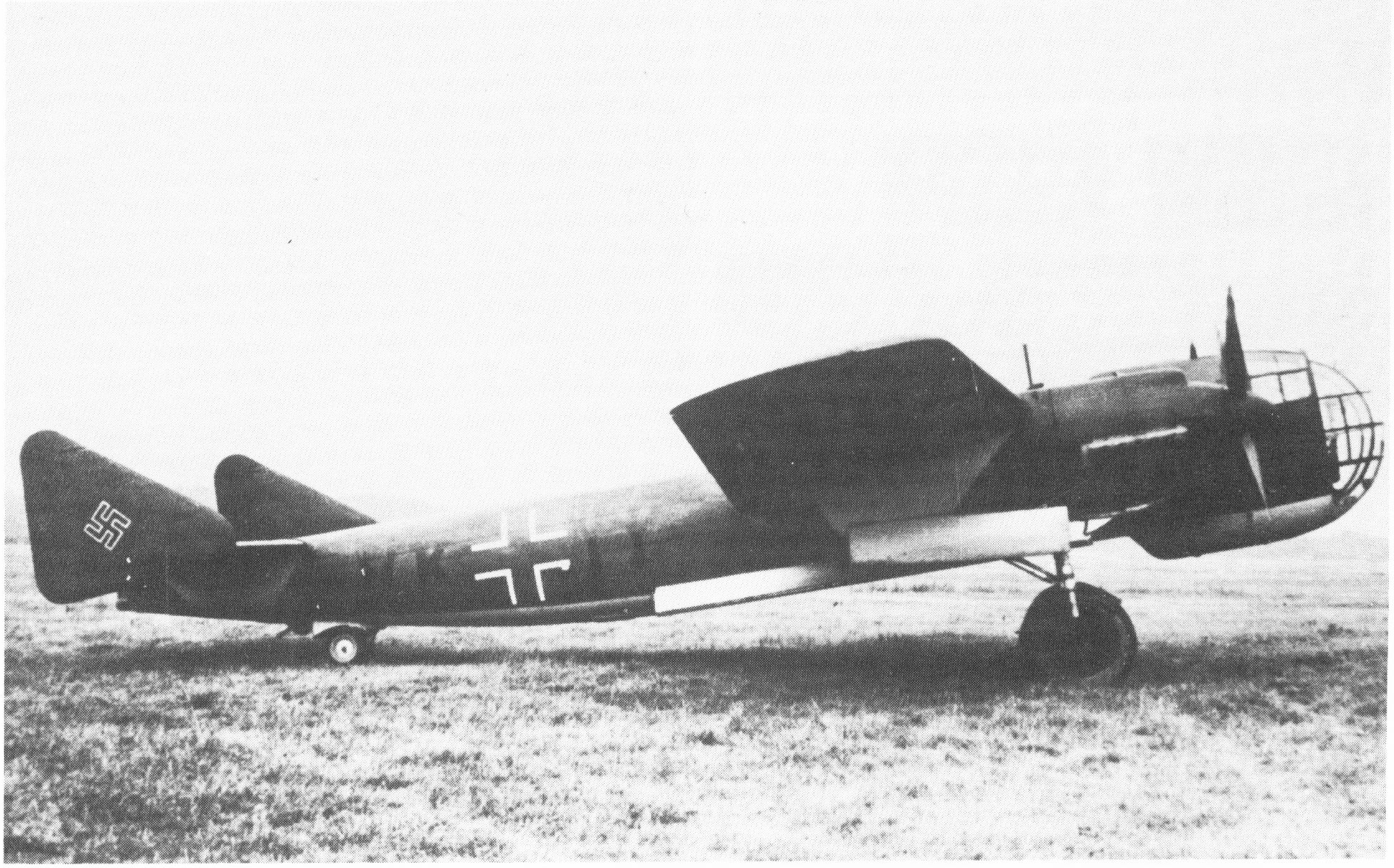

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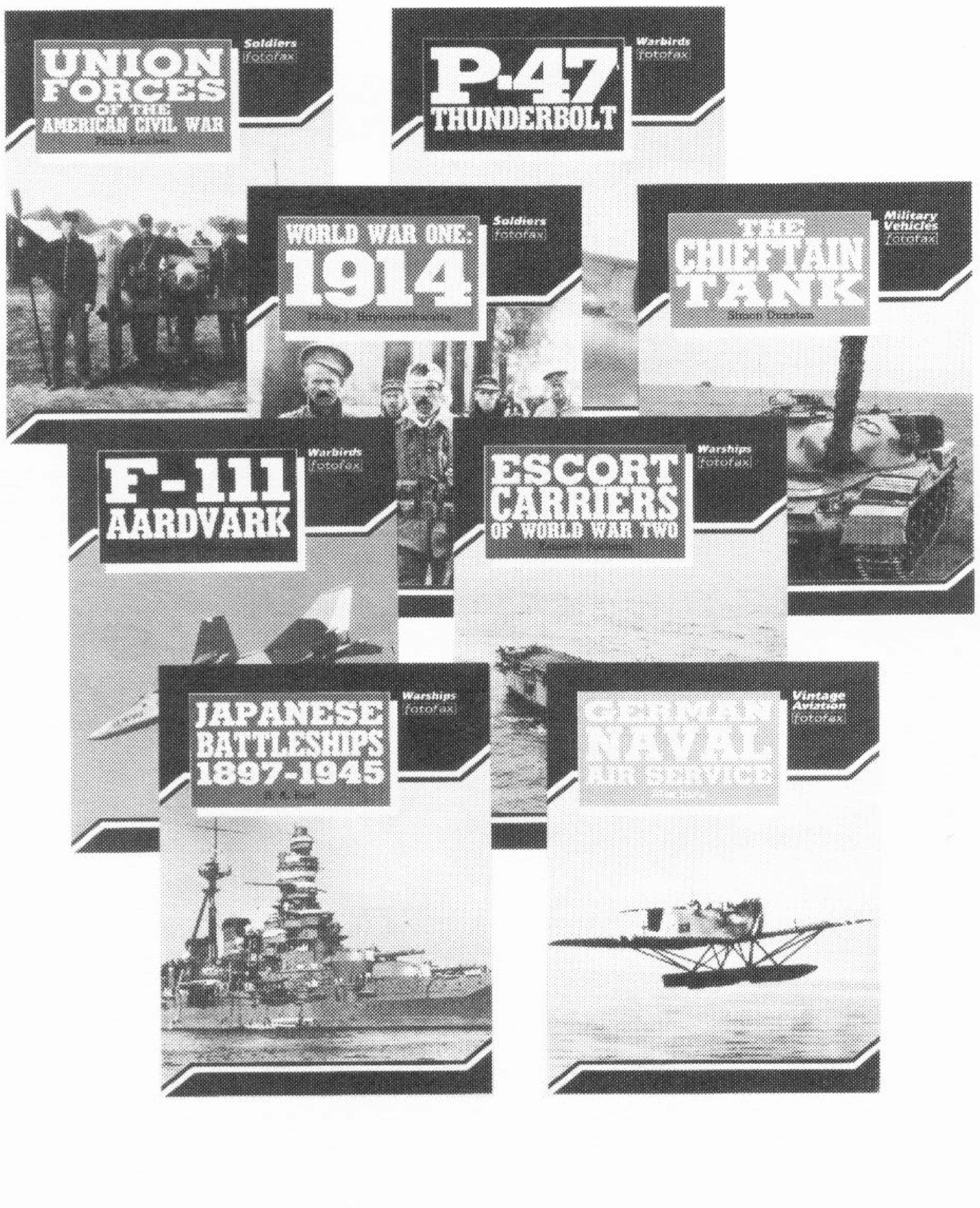

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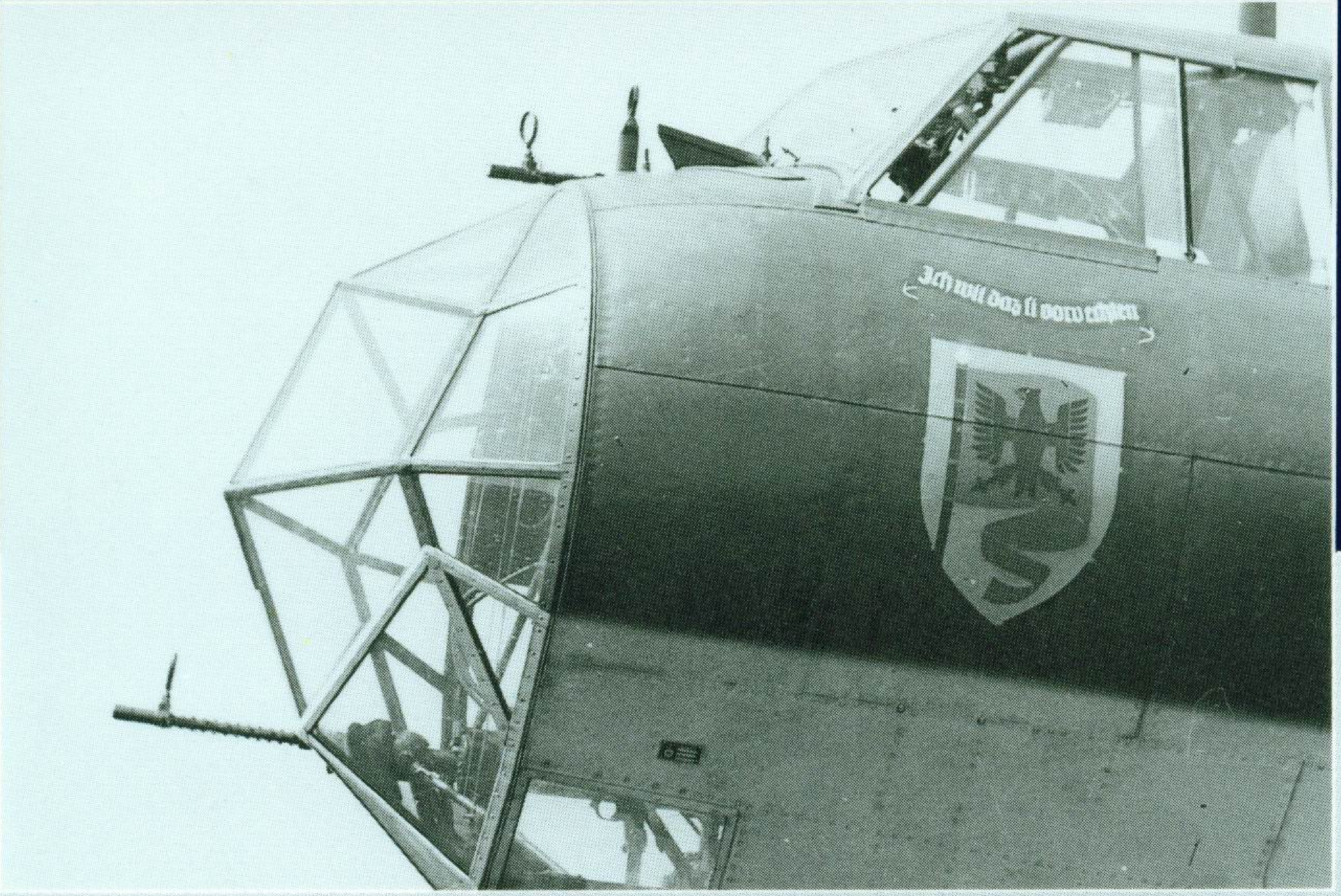

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